

Petroleum Today

Not For Sale

EGYPT ANALYSIS EXECUTIVE SUMMARY

TALENT & TECHNOLOGY
TECHNOLOGY APPLICATIONS
INDUSTRY AT A GLANCE

A 10 - POINT PLAN TO
REDUCE THE EUROPEAN
UNION'S RELIANCE ON
RUSSIAN NATURAL GAS



An Interview with

ARGAS 

MOATH AL RAWI
CEO ARGAS



wintershall dea

MINDS OF ENGINEERS.
PIONEERS AT HEART.

wintershalldea.com



Exploration & Production
Drilling & Workover Rigs
Oilfield Chemicals
Technical Services



Dr. M.K. Dabbous
IPR Chairman
and CEO

IPR Achievements in 2022

IPR Energy is a group of international companies in the energy sector actively engaged in oil and gas exploration and production around the world; and providing engineering and oilfield services worldwide. We capitalize on our technical expertise and innovation to improve petroleum recovery, whether in our own E&P portfolio or through our global service offering to the market.

We are open to bond through partnerships with national and international companies. U.S. independent IPR Energy Group continues to execute its largest drilling and operational campaign since entering the upstream sector in Egypt in 1993.

IPR Chairman and CEO Dr. Mahmoud K. Dabbous commented, 2022 has been a great year with promising results. With an aggressive growth strategy to add reserves and production through targeted acquisitions and ambitious field exploitation programs, IPR remains committed to expand investments in Egypt in the long term.



IPR Expands Investment in Egypt

IPR continues to intensify its investments in Egypt amidst a healthy economic environment that has encouraged international participation. IPR maintains great confidence in Egypt's political leadership, industry successes, and economy as evidenced by its IPR's future plans and 42-year presence injecting billions of \$ across Egyptian producing and exploratory concessions, infrastructure facilities development, and technology transfer. IPR accelerated its pace and completed the purchase of Japanese partner Sojitz's 40% working interest in the Alamein/Yidma concession of the Western Desert, reestablishing IPR's 100% working interest. Also, IPR has recently completed the acquisition & operations of the El-Fayoum and North Beni Suef concessions in the Western Desert from Pharos Energy in 2022 as part of its aggressive expansion strategy in Egypt. This acquisition presents scalable growth for IPR underpinned by a secured investment strategy including plan to invest over \$80 mm in drilling exploration and development wells, workovers, recompletion, waterflooding and seismic acquisition IPR continues to pursue and expand investments in Egypt and the MENA region by both adding acreage and collaborating with partners in advancing technical programs and plans for the optimum benefit of all stakeholders, particularly the Egyptian state represented by the Ministry of Petroleum, EGPC, EGAS, and GANOPE.



We are a leading company in the field of providing technical solutions and new technologies globally since 1981. Moreover, the continuous improvement of the Oilfield Services Division qualified it to deliver more than 30 services including drilling and workover activities in Egypt.

Drilling Activities

2022 has been an active year for drilling, completion, and workover activities in IPR's operated and non-operated concessions. In Egypt, seven wells were drilled in the El Fayoum concession, one well was drilled in the S. Disouq concession, one well was drilled in the N. Ras Qattara concession and multiple wells were recompleted in the Alamein- Yidma concession utilizing IPR's 350 HP workover rig. In Pakistan, one shallow well commitment was drilled in the Guddu concession with the discovery of Umair SE-1.



IPR was recently an Event Sponsor of the U.S. Chamber of Commerce's U.S.-Egypt Business Council, where we were honored and privileged to interact with His Excellency, Abdel Fattah El-Sisi, President of the Arab Republic of Egypt. This forum opened the floor for discussions on key issues related to the recently published Golden License Handbook, aimed at facilitating various business initiatives in Egypt.



OUR VISION IS GLOBAL OUTREACH

Since 1983, EGYPTGAS has grown to become the pioneer company in the field of natural gas projects and petroleum services



Eng./ Wael Gowayed
Chairman



OUR SERVICES

- Onshore/offshore petroleum platforms and refineries rehabilitation.
- Natural gas transmission and distribution projects.
- Protective and innovative coating solutions.
- Storage tanks and buildings maintenance.
- scaffolding and access to work techs.
- Pipeline and infrastructure projects.
- Integrated civil works.
- Cathodic protection.

Egypt Gas thinks about tomorrow & acts today Through its highly-skilled workforce EGYPTGAS is committed to provide EPC projects in A wide range of fields

www.egyptgas.com.eg



30 Elmfatesheen St. , Almaza, Heliopolis, Cairo.
Tel. : (+202) 24178144 - (+202) 24183014
Fax. : (+202) 24178607
P.O.Box : 1438 / C.C.R : 117267
E-Mail : egyptgas@egyptgas.com.eg





HEIGHT SAFETY AND SAFE ACCESS SOLUTIONS FOR OIL&GAS

 **EGYPS**
EGYPT PETROLEUM SHOW

Visit us at booth 3177

FALLPROTEC

Height Safety Products

SAFESCIENCE
Your Safety Partner's





ADES
ADVANCED ENERGY SYSTEMS



About Us

ADES Group is a leading oil & gas drilling and production services provider in the Middle East and Africa, offering offshore and onshore contract drilling, workover and offshore production services. Since its establishment in 2002, ADES has grown to become Egypt's largest offshore drilling operator by number of rigs, with a growing presence in the Kingdom of Saudi Arabia and Algeria and ongoing penetration into new MENA markets. ADES Group's business model focuses on leveraging the Group's lean-cost structure, its highly-skilled workforce of over 3,500 personnel, and its customer-centric approach to create real value for its clients.



Drilling & Workover
Services



MOPU Services



Jack-up Barge and
Project Services



B5, Capital Business Park, Al Sheikh Zayed, Giza, Egypt

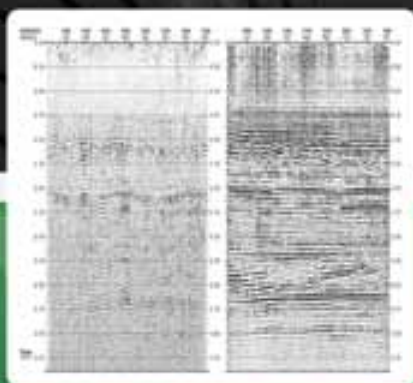
Fax: +202 38525352

Phone number: +202 38525354

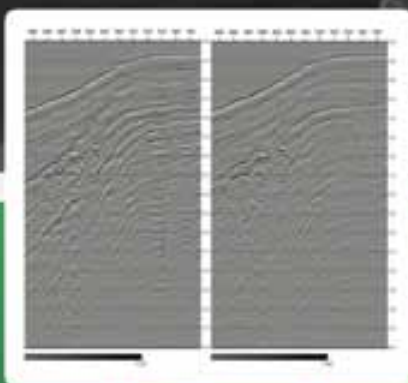


BETTER IMAGING

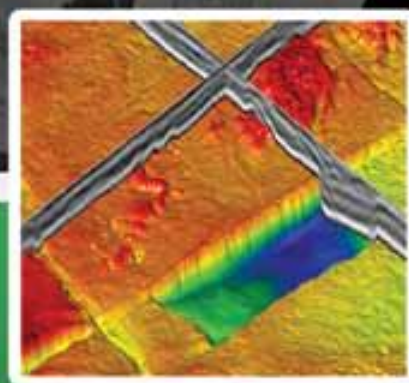
PetroTrace is an innovative and long established geoscience company serving a large number of clients in the oil and gas exploration and production business. We provide best-in-class time processing, depth imaging, structural interpretation, reservoir characterisation, analysis and geo-consulting work. Our success stems from industry-leading geoscience technology powered by high performance computing and the application of ground-breaking proprietary tools. PetroTrace teams are highly skilled and experienced professional geoscientists who are able to create customised, bespoke solutions to complicated seismic challenges for both land and marine seismic data.



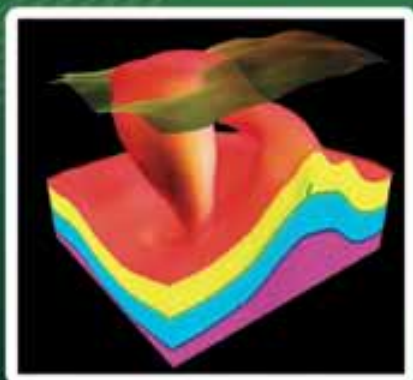
Interactive Land Statics Correction



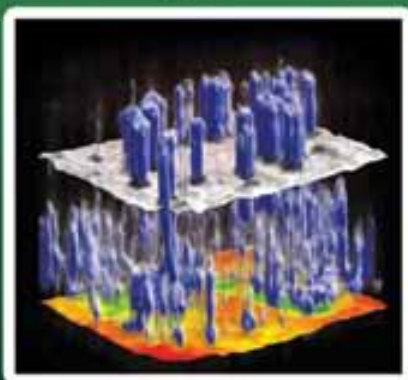
WEMA, SRME, and Radon Demultiple Workflows



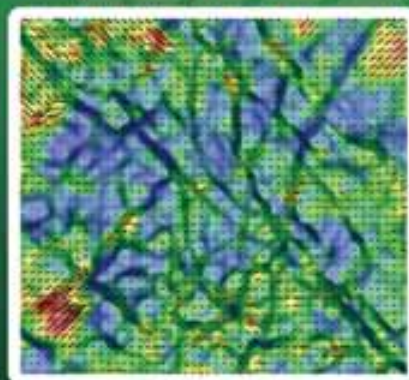
High-density Single Component Data Processing



Pore Pressure Distribution



Gas Chimney Detection



Fracture Characterisation



Please join us on **Monday 13th Feb 2023** at EGYPs technical romm 4 @ **02:30 PM**



Free Zone-Nasr City, Street 15, Al-Arafa building, Cairo, Egypt
 +202 2270 4554
 +202 2270 4554
 +202 0102 458 3300

Contact Person:
Eng. Osama Omar – Operations Manager
 +202 0111 144 6003
 osama.omar@ptgeos.com
 www.ptgeos.com

ASSIUT HYDROCRACKING COMPLEX

AHC is a deep conversion refining plant which processes the fuel oil into highly demanded petroleum products, mainly EURO-V Diesel in addition to augmenting the current production of Naphtha and LPG satisfying the Upper Egypt demands.

AHC aims at fulfilling sustainable development objectives in Upper Egypt, focusing on the economic, social and environmental perspectives. The project is well progressing in its execution phases targeting completion by 2024.



ANOPC

ASSIUT NATIONAL OIL PROCESSING COMPANY

شركة أسبوت الوطنية لتصنيع البترول



EPIS

is a full service nondestructive testing company with specialized data acquisition equipment and reporting capabilities. All technicians are certified in accordance with the American Society for Nondestructive Testing, Recommended Practice SNT-TC-1A. We strive to bring outstanding values to the clients. We undertake to provide the clients with the shortest feedback time, the most competitive price, the most effective technical support, the most professional customer service and the most accurate and earliest report at each service link. Such commitments will serve as an impetus for our clients to improve product quality and more importantly build their confidence in their brands.

SERVICES

- ☑ Inspection
- ☑ Pressure Test
- ☑ Dropped Object Survey
- ☑ Flow Line Construction
- ☑ Project Management
- ☑ Waste Management
- ☑ Rope Access
- ☑ Rig Inspection & Rig audit
- ☑ Cleaning Tanks & Coatings

WHY US ?

Health safety, Environment & Quality must come first in everything we do in our business. We Are Creative Team ,Honest and Dependable. Quality Commitment. We Are Always Improving

"Our mission is to provide high quality services for our clients"



INSPECTION



- ☑ Tubular Inspection
- ☑ Lifting Gear Inspection
- ☑ Electric Inspection
- ☑ Mechanical Vibration Inspections
- ☑ Advanced Inspection Services

FLOW LINE CONSTRUCTION



- By bucking machine
- By welding, and fabrication

RIG INSPECTION & RIG AUDIT



The purpose of Rig Inspection was to determine the general condition and state of maintenance of the equipment, in order to minimize downtime caused by mechanical breakdown during drilling operations and to ensure that the equipment is maintained in safe working order.

WASTE MANAGEMENT



- EPIS provides Cuttings boxes with high quality.
- EPIS provides Normal Waste Incineration on Waste Site

CLEANING TANKS ,COATINGS & INSPECTION



Because unwanted corrosion can contaminate liquids, it's important to ask suppliers question that allow the confident choice of a coating with proven field performance.

PULLING UNIT 350 HP



We own pulling unit 350 hp works abroad Egypt.



GEORGE WAHID
General Manager
+201229174189

CONTACT US

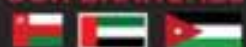
RAOUF RASMY
QA/QC Manager
+201223424778

MOHAMED SHOUKR
Project Manager
+201033055335

www.epis-eg.com
Info@epis-eg.com

25 H /A SHUKRI ABDEL HALIM
ELASLKY , ELMAADI, CAIRO, EGYPT

OUR BRANCHES



www.petrosafe.com.eg

2023



PETROSAFE

**Together...
We Achieve More.**



PetroSafe

Petroleum Safety & Environmental Services Co.

Our Mission is to conduct and execute HSE services as technical studies, consultancies, training, systems evaluation, quality, fire fighting, risk assesment and projects in all these services for Oil & Gas industry and other industries in Egypt and Middle East according to the international and legal standards to support our clients maintaining a professional performance that protect individuals, properties and environment which will positively reflect on sustainable development performance.

☎ 0225176935/6/7

✉ info@petrosafe.com.eg



SAFETY . TRAINING . ENGINEERING . ENVIRONMEN . WATER TREATMENT . HSE DIGITALIZATION
TECHNICAL SUPPORT . ISO QUALIFICATIONS . NORM MANAGEMENT . WASTE MANAGEMENT

Petroleum Today

contents

- 9 Low-Carbon Investments on Hydrogen and CCUS Outlook
- 12 News
- 24 Talent & Technology
- 36 A 10 - Point Plan to Reduce the european union's reliance on russian natural gas
- 44 Energy Transition:
Renewables Remain The Cornerstone of Future Power Generation
- 50 Egypt Analysis Executive Summary
- 60 Need a Lift?
A Rotary Gear Pump, an ESP System Without the ESP Pump
- 72 Industry At A Glance



An Interview with
MOATH AL RAWI
CEO ARGAS

19

- ٢ تعيين رؤساء جدد لشركات البترول ونواب رئيس الهيئة
- ٣ سنتامين العالمية تدشن ٤ كيانات جديدة للتنقيب عن الذهب بالصحراء الشرقية
- ٤ فينترسال ديا تكتشف بئرا جديدا للغاز الطبيعي في منطقة التنقيب بشرق دمنهور
- ٧ حوار مع المهندسة/ عبير لهيطه العضو المنتدب للشركة المصرية لخدمات النقل والتجارة "إيجيترانس"
- ١٢ حوار صحفي مع المهندس/ خالد ابراهيم رئيس مجلس الإدارة والعضو المنتدب لشركة بترومنت

Low-Carbon Investments on Hydrogen and CCUS Outlook

Rystad Energy research shows that investments in the geothermal, CCUS, hydrogen, hydropower, offshore and onshore wind, nuclear, and solar industries are set to hit \$620 billion in 2023, up from about \$560 billion last year.

Spending on low-carbon projects will increase by \$60 billion this year, 10% higher than 2022, led by wind developments but helped by a significant rise in funding for hydrogen and carbon capture, utilization and storage (CCUS) infrastructure. The growth in total spending is a slowdown from recent years which averaged 20% annual increases as cost-conscious developers tighten their purse strings after two years of soaring prices.

Investments in green sectors surged 21% in 2022 to overtake related oil and gas spending for the first time, but inflation-spooked developers seem set to rein in spending growth this year.

Solar and onshore wind will contribute the most by a sizable margin. Spending on solar investments will total \$250 billion this year, rising only 6% over 2022.

Spending growth will vary widely across industries. Hydrogen and CCUS are expected to see the most significant annual increase, growing 149% and 136%, respectively. Total hydrogen spending will approach \$7.8 billion in 2023, while CCUS investments will total about \$7.4 billion.

In contrast, the hydropower market is expected to shrink over 2022, while nuclear investments are forecast to stay relatively flat. Onshore wind investments are projected to increase by 12% to about \$230 billion, while offshore wind spending is expected to jump 20% to \$48 billion. Expenditure in geothermal is expected to jump significantly about 45% albeit from a relatively low starting position

In the end, greetings to you, Egypt has pride and dignity

In the end, greetings to you, Egypt has pride and dignity

Petroleum Today

Chairman
Mohamed Bendary

Vice-Chairman
Ali Ibrahim

Executive Editor-in-Chief
Magdy Bendary

Scientific Secretary
Ali Afifi

Sales Manager
Mahmoud Mabrouk

Operation Manager
Medhat Negm

Communications Manager
Kholoud Hussain

Marketing Manager
Marwa Negm

Social Media Manager
Athar Yousry

Managing Editor
Ahmed Bedier

Financial Management
Wael Khalid

Art Director
Walid Fathy

Office Manager
Samaa Abd elshafy

Photography
Mohamed Fathy

Scientific Staff

Dr. Attia M. Attia

Dr. Adel Salem

Dr. Ahmed Z. Nough

Dr. Ismail Aiad

Dr. Gamal Gouda

Eng. Mahmoud A. Gobran

Eng. Mohamed nada

Eng. Taher Abd El Rahim

Eng. Mohamed Bydoun

Eng. Samir Abady

Dr. Lubna Abbas Saleh

Special thanks to all the
Society of Petroleum Engineers (SPE)
Mr. Hany Hafez

All opinions expressed through the
magazine is pertaining to their authors &
don't express the magazine's point of view

Publisher & Distribution

PT MEDIA

41 El Israa St. - 26th of July Tower
Lebaanon Sq., Mohandeseen Giza - Egypt

Tel. : +202 33023221

Mob.: 01006596350

Mob.: 01000533201

E-mail: petroleum.mag@gmail.com

E-mail: mohamed@petroleum-today.com

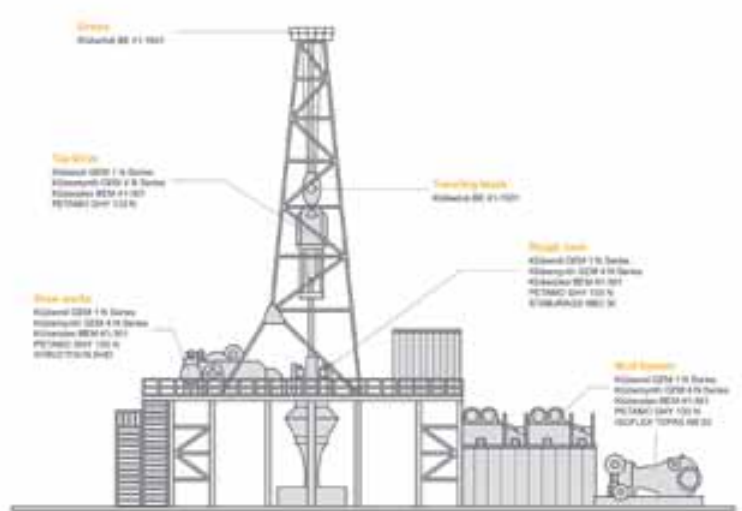
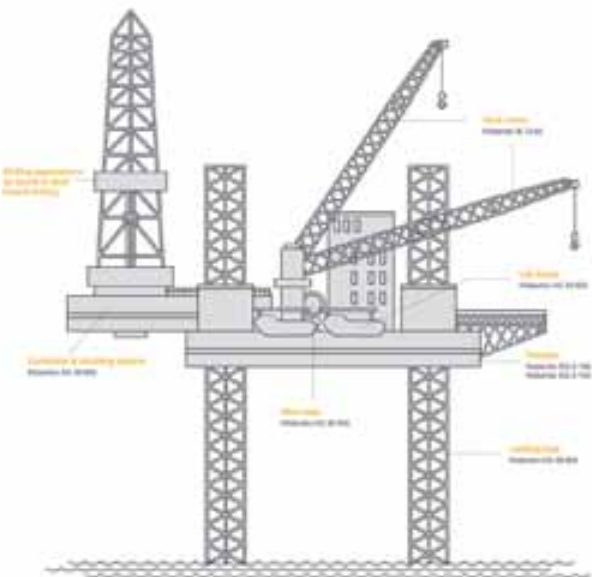
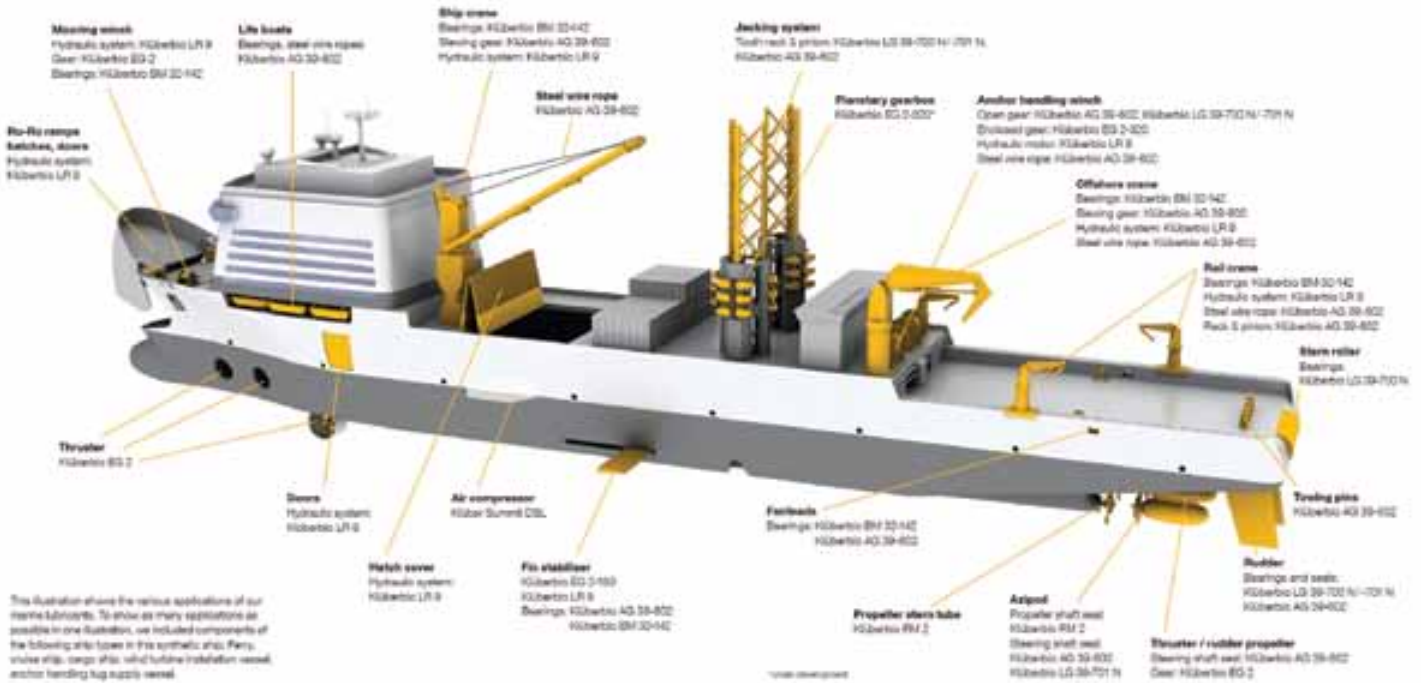
www.petroleum-today.com

Design and Print by:



Mob.: 01007904247

Copyright Reserved



Alex Office:
 Address: P.O.Box 114 Elsaray
 242 Abdel Salam Aref st., Loran, APT. 103, Alexandria, 21411, Egypt
 Phone: +20 (3) 5833301 - 5833294 Fax: +20 (3) 5823514
 Email: catec@catecegypt.com

Cairo Office:
 Address: 2B Nozha st., Heliopolis, APT. 7, Cairo, 11341, Egypt
 Phone: +20 (2) 24145127 / +20 (2) 24145128
 Fax: +20 (2) 24145129
 Email: catec.cairo@catecegypt.com



Consulting And Technical Engineering Co.
Installation • Agency • Engineering

The First in the Middle East & Africa

in providing steam generation services to oil & gas fields

Complete mobile steam generators and boilers

with operation and service



CATEC Head Office (Alexandria):

P.O. Box 114 Elshary - 242 Abdel Salam Ave/ St. Loran - APT. 103
Alexandria - Egypt - Tel: (+203) 583 3301 - Fax: (+203) 582 3514
caterc@catcegypt.com
www.catcegypt.com

CATEC Cairo Office:

2B Nuzha Street, APT. 7 - Helipolis 11341
Cairo - Egypt - Tel: (+202) 241 45127 - Fax: (+202) 241 45129
caterc.cairo@catcegypt.com

KLUBER LUBRICATION

Special Lubricants ...
For Special Applications ...
To The Special Customers ...



SOLE AGENT IN EGYPT:



Consulting And Technical Engineering Co.
Installation • Agency • Engineering

Head Office (Alexandria):

P.O. Box 114 Elshary
242 Abdel Salam Ave/ St. Loran - APT. 103, Alexandria - Egypt
Tel. : (+203) 583 3301
Fax: (+203) 582 3514
caterc@catcegypt.com
www.catcegypt.com

Cairo Office:

2B Nuzha Street, APT. 7 - Helipolis 11341, Cairo - Egypt
Tel. : (+202) 24145127
Fax : (+202) 24145129
caterc.cairo@catcegypt.com



Drum and Container Pumps

We Have the Right Pump
For Every Fluid



Consulting And Technical Engineering Co.
Installation • Agency • Engineering

Head Office (Alexandria):

P.O. Box 114 Elshary
242 Abdel Salam Ave/ St. Loran
APT. 103, Alexandria - Egypt
Tel. : (+203) 583 3301
Fax : (+203) 582 3514
caterc@catcegypt.com
www.catcegypt.com

Cairo Office:

2B Nuzha Street, APT. 7
Helipolis 11341, Cairo - Egypt
Tel. : (+202) 24145127
Fax : (+202) 24145129
caterc.cairo@catcegypt.com

Eni targets 10-GW solar, wind projects in Egypt



Italian energy group Eni said on Sunday it had made a new gas discovery in an Egyptian offshore field in the Eastern Mediterranean sea.

State-controlled Eni is looking for new gas sources as it aims to completely replace gas imports from Russia by 2025 following the fallout from Russia's invasion of Ukraine.

The new discovery is located in the Nargis-1 exploration well and «can be developed leveraging the proximity to Eni's existing facilities», the group said in a statement.

The Nargis-1 well is part of Egypt's 1,800-sq. km Nargis Offshore Area concession operated by Chevron, with a 45% interest in it. Eni also holds a 45% stake, while Tharwa Petroleum Company SAE holds a 10% interest.

Zohr gas field production jumps to 2.7 bln cubic feet daily

The Ministry of Petroleum and Mineral Resources announced that Zohr gas field achieved a record during Fiscal Year 2021|2022- since the start of production in 2017|2018-. Current production from Zohr gas field jumped to 2.7 billion cubic feet per day. The ministry clarified in a statement that the volume of investments in the gas field hit 741 million dollars during the relevant year. Investments have exceeded US\$12 billion since the beginning of work in the field, it added.



Egypt Has Largest Solar, Wind Capacity in Arab World

Egypt has topped the list of the top Arab countries in producing electricity from renewable resources, with a 3.5 GW of solar and wind capacity. According to the Information and Decision Support Center of the Egyptian Cabinet (IDSC), Egypt ranked first in the Arab region, followed by the United Arab Emirates with about 2.6 GW, Morocco with about 1.9 GW, Jordan with about 1.7 GW, and followed by Saudi Arabia with a production volume of 0.78 GW. The North African country hoped to reach 6.8 GW in 2024, divided between 1.6 GW of wind energy and 1.9 GW of solar power plants, as the Sovereign Fund of Egypt has cooperated with the Norwegian company "Scatec" and other companies to operate the Ain Sukhna plant – the first green hydrogen plant – with a production capacity of 100 MW. While, Oman, Morocco, and Algeria,



the region's top three countries, are set to produce 39.7 GW from prospective projects, which is the equivalent of more than four times the new gas-fired capacity from the three countries.



Wintershall Dea made a natural gas discovery in the East Damanhour exploration block

Wintershall Dea has found gas in its East Damanhour exploration block in the onshore Nile Delta.

The licensees, operator Wintershall Dea (40%) and partners Cheiron Energy (40%) and INA (20%), as well as the Egyptian Gas Holding Company (EGAS) will assess the discovery as a possible tie-back development towards the nearby infrastructure at Disouq. The Disouq gas project is operated by DISOUOCO, a Joint Venture between Wintershall Dea and EGAS. Sameh Sabry, Senior Vice President and Managing Director BU Egypt, said: “Wintershall Dea wants to grow in Egypt and this discovery is a positive sign. Egypt, the wider region and the world badly need additional energy resources and Wintershall Dea is doing all it can to deliver additional volumes.”

BP Awarded King Mariout Block in Egypt’s West Med

BP has been awarded the King Mariout exploration block offshore Egypt following its participation last year in the limited bid round organized by the Egyptian Natural Gas Holding Company. The King Mariout Offshore area is located 20 km west of the Raven field in the Mediterranean Sea and covers 2600 km² with water depths ranging between 500 and 2100 m. The block is within the West Nile Delta area, for which material gas discoveries could be developed using existing infrastructure. BP holds a 100% stake in the block. BP is a major player in Egypt investing more than \$35 billion in the area over the past 60 years.



4 International Companies Shortlisted for \$2bn Petrochemicals Complex in Egypt



Egypt’s Anchorage Investments has shortlisted four international companies to construct a \$2 billion petrochemicals complex in the Suez Canal Economic Zone on the Red Sea. These are South Korea’s Hyundai and Samsung, Italy’s Technip Energies and Spain’s Tecnicas Reunidas, Anchorage Investments said on Tuesday. Anchorage Investments, which develops and invests in industrial projects within the downstream oil and gas and mining-driven manufacturing sectors, had issued a tender for the Anchor Benitoite project in Ain Sokhna in March. Scheduled to be completed within three years after the front-end engineering and design phase, the project aims to contribute to Egypt’s gross domestic project and increase its chemical exports and foreign direct investments.

ARAB & INTERNATIONAL NEWS

Libya to increase oil production to 1.2mIn bpd in two weeks - NOC

Libya's National Oil Corporation (NOC) aims to bring back production to 1.2 million barrels per day (bpd) in two weeks, NOC said. Current oil production is at 860,000 bpd, compared with 560,000 bpd before resuming production, NOC added. Libya's crude production had resumed at several oilfields, after lifting force majeure on oil exports last week. A blockade of oil output by groups aligned with eastern commander Khalifa Haftar had cut off funding to the Tripoli-based Government of National Unity (GNU) led by Prime Minister Abdulhamid al-Dbeibah. The Libyan oil ministry had said earlier that production is at more than 800,000 (bpd) and will reach 1.2 million bpd by next month. The country's oil exports at times last year reached 1.2 million bpd.



U.S. and Saudi Arabia sign 18 agreements in energy, other areas

The United States and Saudi Arabia signed 18 partnership agreements in fields including energy, communications, space and healthcare during a visit by U.S. President Joe Biden, Saudi state TV al-Ekhbariya reported. The agreements include deals with U.S. aerospace and defence firms Boeing and Raytheon, as well as healthcare companies Medtronic (MDT.N), Digital Diagnostics, and IQVIA, according to Saudi state news agency (SPA). There were also agreements in clean energy projects, nuclear energy and uranium, it said. Wealthy Gulf OPEC members like Saudi Arabia and the UAE are investing in renewable and clean energy while also stressing the continued importance of hydrocarbons for global energy security at a time of growing calls for a shift away from fossil fuels.

Shell takes 6.25% stake in Qatar's LNG expansion project

State-owned QatarEnergy signed a deal with Shell Plc on Tuesday for the North Field East (NFE) expansion of the world's largest liquefied natural gas (LNG) project. The London-based company will get a 6.25 percent holding in the project, QatarEnergy CEO Saad al-Kaabi told a news conference. Qatar, the world's largest gas exporter, is partnering with international companies in its \$30 billion NFE expansion (NFE), which includes plans to add six LNG trains, ramping up production by 64 percent to 126 million tonnes per annum (mtpa) in the next five years. The planned output expansion comes amid a global energy crunch. Demand for LNG has soared since the Russian invasion of Ukraine and European gas companies are looking to tie up new sources before winter sets in. In June, QatarEnergy awarded TotalEnergies



a 25 percent interest in a new joint venture, which will hold a quarter share of the 32 Mtpa NFE project, equivalent to one 8 Mtpa LNG train. It has also signed similar deals with Exxon Mobil Corp., ConocoPhillips and Eni SpA.



New gas pipeline linking Spain to France could be operating in 8 - 9 months

A new gas connection linking Spain and France could be ready to operate within eight or nine months, Spanish Energy Minister Teresa Ribera said on Friday. «This new interconnection, this gas pipeline could be operating in about 8 or 9 months on the southern border side, that is, from the Pyrenean to Spain,» she said in an interview with national TVE station.

UAE secured 41.5% of Japan's crude oil needs in November

The UAE secured 41.5 percent of Japan's crude oil needs in November, which is equal to 32.17 million barrels, according to the Agency for Natural Resources and Energy in Tokyo.

The agency, part of the Japanese Ministry of Economy, Trade and Industry, stated that the amount of crude that Japan imported during that month amounted to 77.53 million barrels, of which 74 million barrels, or 95.4 percent, originated from six Arab countries: UAE, Saudi Arabia, Kuwait, Qatar, Bahrain and Oman, with the Emirates being the Asian nation's top exporter of oil.

Oil remains the most significant energy source in Japan, accounting for about 40% of the country's total energy supply, according to the International Energy Agency.



China lifts 78% of Omani crude exports in July



The average total production of crude oil and oil condensates in the Sultanate of Oman for the month of July 2022 amounted to about 1.08 million barrels per day (bpd), an increase of 1.4 per cent compared to the previous month, the Ministry of Energy and Minerals announced. Crude oil production climbed 15.4 per cent in July 2022 compared to the same period last year, it stated. The average price of Oman crude oil traded during July 2022 (for delivery in September 2022) was \$103.21 per barrel. Exports totalled 28.9 million barrels. Production of crude and oil condensates totalled 33.6 million barrels in July 2022. Countries importing Omani crude oil for the month of July 2022 were led by the People's Republic of China with 78 per cent of the total, followed by South Korea with 9 per cent, with the remainder distributed primarily between India, Japan and Thailand. Natural gas production averaged 148.6 million m³/day in July 2022, a decrease of 1.5 per cent compared to the previous month's average. The decrease was attributed to maintenance of some sites and the replacement of some gas pipelines.

CORPORATE NEWS

TAQA to acquire Abu Dhabi AlMansoori Petroleum Services



The Industrialization and Energy Services Co., known as TAQA, which is backed by Saudi Arabia's Public Investment Fund, has entered a definitive agreement to acquire 100 percent of Abu Dhabi's AlMansoori Petroleum Services. Expected to close in the fourth quarter of 2022, the transaction comes as part of expanding TAQA's Well Services business to the wider Middle East and North Africa region. AMPS will add complementary products and services to TAQA's portfolio, including Early Production Facilities, Well Testing, Slickline, Marine Stimulation Vessels, Multi-Purpose Service Vessels and Inspection Services. Saudi Arabia's PIF owns 45 percent of TAQA, while the remaining 55 percent is owned collectively by joint stock companies and several private and industrial investors.

Enppi, Petrojet acquire foreign partner stake in ICD for \$117m



Enppi and Petrojet — which are affiliated with the Ministry of Petroleum and Mineral Resources — purchased the share of foreign partner Star Company Ltd. in the International Company for Drilling operating under the free zone system (50% of the company) at a value of \$117.6m or EGP 2.2bn last week. The foreign partner Star Gas owned about 50% of the company, while the remaining share is broken down to 20% owned by South Valley Petroleum Holding Company, 15% by Enppi Petroleum, and 15% by Petrojet Petroleum. After the implementation of the deal, the company's ownership structure became 40% for Enppi, 40% for Petrojet, and 20% for South Valley Petroleum. Cairo Capital Securities Brokerage acted as the broker of the deal for both the buyer and the seller.

ADNOC acquires a 50% stake in TotalEnergies Egypt for approx. \$200mn



ADNOC Distribution has entered into an agreement with TotalEnergies Marketing Afrique SAS to acquire a 50% stake in TotalEnergies Marketing Egypt LLC (TotalEnergies Egypt) for approximately \$186mn, with an additional earn-out of up to \$17.3mn, if certain conditions are satisfied, the UAE's state-owned oil and gas distributed said in a statement. The partnership between TotalEnergies Egypt and ADNOC Distribution follows the strategic agreement signed by both companies on the occasion of the state visit of His Highness Sheikh Mohamed bin Zayed Al Nahyan, President of the United Arab Emirates, in Paris. ADNOC Distribution's acquisition is expected to be completed in Q1 2023.

Wintershall Dea to exit from Russian projects

Wintershall Dea intends to fully exit Russia following a principle decision of the Management Board, approved by the Supervisory Board. The company will leave the country in an orderly manner, complying with all applicable legal obligations.

Wintershall Dea CEO Mario Mehren says: «Wintershall Dea will end its Russian activities. Continuing to operate in Russia is not tenable. Russia's war of aggression in Ukraine is incompatible with our values and has destroyed co-operation between Russia and Europe.»

Mehren continued: "In recent months, limitations imposed by the Russian Government on operations of Western companies in the country, and external interferences in our joint venture operations, made it impossible for Wintershall Dea to operate in Russia as before and resulted in an economic expropriation of the Joint Ventures in Russia.»

From the first days of the war, Wintershall Dea made clear its condemnation and took action. The company announced an immediate stop to new projects in Russia, and with Russian partners outside of Russia.

Since then, the company has been continuously assessing its existing operations.

Wintershall Dea deconsolidated its Russian business from its financial reporting in Q4 2022. Consequently, the company expects to record a one-off non-cash loss of €5.3 billion. This relates to Wintershall Dea's Russian joint ventures, and impairments from Nord Stream AG and the WIGA midstream business.

Wintershall Dea has built significant financial flexibility in the last year. Since the start of the war, the company had prudently adjusted its financial framework, excluding Russian activities from planning.



For over 25 years, it is our ambition to supply Egypt's industrial companies with innovative and reliable technologies. Therefore we constantly increase our network of partners and proudly announce our new sales-partnerships with:

VOITH

VOITH is a global technology company from Germany and has a proud history of over 150 years. Their leading technologies in the field of drive and control systems for turbomachinery include:

- Geared Variable Speed Drive Systems
- Hydrodynamic Couplings & Joint Shafts
- Coupling Technologies
- Turbo Gears
- Actuators & Control Systems for Turbomachinery



PRO-DO-MIX

PRO-DO-MIX is a leading Italian manufacturer for efficient, reliable and smart mixing solutions. Their technologies are widely used and proven, such as in Oil & Gas, Petrochemical, Chemical, Fertilizer Water & Waste Water Industry:

- Vertical Agitators
- Surface Aerators
- Dry Powder Feeders
- Dosing Stations
- Polymer Preparation Units
- Submersible Mixers

Hady Meiser Egypt Company



A delegation from the state of Tanzania, accompanied by the Arab Contractors Company, the main contractor for the Tanzania Dam project, came to meet them.

Acc. **Taha Abou Rabia** - General Manager of the company

Mr. **Ahmed Yehia** - Director of Planning

Mr. **Ahmed El-Gamal** - Sales Manager

The Gratings won the admiration of the Tanzanian delegation and the accompanying delegation from the Arab Contractors Company headed by Eng. **Ahmed Abdel Maksoud** - Deputy Director of the Arab Contractors' Workshops

Eng. **Mohamed Yehia** - Project Manager



The Energy & Marine Consultants.

ABL Group is a leading independent global energy and marine consultancy, working in energy and oceans to de-risk and drive the energy transition.



Marine Consulting & Engineering Services



We provide a wide range of highly specialized technical engineering and consulting services across our group companies, to fully define a client's unique technical challenge, and to provide in response focused advice or solutions to support the safe, efficient, and sustainable execution of an operation or project.

Energy & Marine Loss Prevention



ABL Group's global network of office-based professionals and on-the-group experts ensures we have the market-leading expertise in the field of loss prevention across all major offshore energy and maritime hubs. De-risking activities across energy and oceans is at the heart of everything that ABL Group does. Therefore, we have worldwide staff trained in loss prevention services, enabling us to rapidly maneuver to support any type of project or operation, anywhere in the world, no matter the complexity. Furthermore, our independence means we are able to provide a balanced, impartial and trusted approach.

Marine Loss Management Services



With our maritime legacy dating back more than 150 years to always seek the truth in everything that we do to support a safer marine environment across energy and oceans, ABL Group is a long-standing trusted provider of loss management services, often the first port of call when a marine loss has occurred, no matter where in the world, what time, or the complexity. Our loss management expertise covers marine casualty management, marine casualty investigation, loss adjusting and expert witness support in marine claims, disputes and litigation.



AN INTERVIEW WITH

MOATH AL RAWI

CEO ARGAS

Established in 1966, how do you describe the company's journey throughout the past years? What are the services ARGAS provide?

The Arabian Geophysical and Surveying Company ("ARGAS") was established in 1966, with almost 60 years of experience. The Joint Venture was established and still a partnership between Arab Saudi TAQA, a semi-government entity, along with the French CGG, a leading Geoscience company. The purpose is to nationalize exploration knowledge to develop "natural resources" in the region and to champion Geological and Geophysical surveys thought-out the different methods including, but not limited to seismic data acquisition.

ARGAS expanded its operations to many other countries in the region, and currently serving customers, not just in the Kingdom, but also in other countries, including Egypt, for example, where we have been working here for the past 49 years.

Today, we have a wide reach as we provide Exploration Services, including geophysical and geological measurements in number of countries serving customer in fields of Geothermal Energy, oil and gas, and mining services.

ARGAS, proudly is the oldest geophysical data acquisition services company in the world. ARGAS resilience and process survived decades and served many customers to deliver energy and wealth to our societies.

We work with our technology partners to deploy the best available technologies using our capabilities. We invest in people, equipment, and knowledge to operate mega operations in remote areas, providing challenging logistical and life support to our exploration team with the aim of providing a complete and seamless solution to find natural resources and energy to the world by increasing the economic value of information to help our customers improve their exploration success rate.

ARGAS work in Egypt for almost 50 years, how was that period? And what were the challenges?

Our experience here in Egypt is beyond limits. We operate in a beautiful country across different terrain types, including Western Desert, Delta area, transition zones, and shallow waters.

ARGAS was the first company ever that provided geophysical services in Egyptian western desert where we made a world record of 45 thousand vibrator point acquisition. Our team here in Egypt is made by 90% solid experienced Egyptians, who have global exposure and training to run our operations. We invest in our people and ensure mobility to our staff, so we develop their experience from different

markets. For example, we move people from Egypt to Saudi and then to Oman, or Omanis from Oman to Egypt, so we develop their experience and enrich their knowledge.

As an example, working in Egypt is unique experience, as we operate in environmentally sensitive areas, and therefore, our team outside Egypt learns a lot from relocating to our Egypt operation, similarly, we apply different Geophysical operations in Saudi that allow us to secure low frequencies data for better underground imaging, therefore, moving our Egyptian team to Saudi will help them expand their knowledge.

In Egypt, we have just completed on successful survey south of Al-Alamin: the area was environmentally sensitive, high density, challenging terrain types, unexploded ordinance from the World War Two. Very interesting challenge, and we did it safely and completed our survey ahead of schedule and with great deal of data value to our customer.

'Since 2006 the company has acquired over 47000 square kilometers of seismic data' How did ARGAS manage to maintain work plans amid especially in the last 3 years challenging conditions?

ARGAS's experience exceeds 6000 project and more than 3 million square kilometer of data acquisition. We go further and beyond to find energy to the world. Our goal is to explore "natural resources" regardless of the application, whether it was oil, gas, gold, water or geothermal energy. We find underground wealth using Airborne, Ground operations, or marine Surveys. ARGAS is illuminating the subsurface.

We are the "boots on the ground", the passionate explorers who actively participate in serving our communities. We have number of programs in association with Saudi ministry of energy and Egyptian ministry of petroleum and mineral resources, and our national and international customers, including ENI, Saudi Aramco, Apache, ADNOC and many others that we have been working with in the region, and especially in Egypt.

Our aim is to provide economic solutions by optimizing survey designs to bring the best "value of information" to our customers while sustaining economic and reasonable costs and maintaining lower footprint on our environment. We take our social responsibility very seriously.

Employees career: how does it reflect on your operations?

Currently, almost 59% of our staff (Globally) has more than 10 years of career with ARGAS. more than 48% of our staff worked only for ARGAS in their career. We have many of our employees (in Saudi and Egypt) who worked for ARGAS for more than 20 years.

Everything we do is around the "human", and humans

represent our cornerstone of business, because, we are “the boots on the ground”. Therefore, we are committed to develop the human.

We currently employ around 1,200 people in just one site of our business, just one location. Its intense people operation. The location is almost 700 Km away from the nearest city. Completely at the wilderness. Beautiful experience away from noise and city pollution. Our people are the driver of this success, and we remain strong by them.

Today, ARGAS has policies offering equal and fair chances to everyone, including not just employment, but career development. We have zero tolerance to any barriers. We believe that knowledge and wisdom could exist in every person and in any social category.

What are ARGAS activities as for CSR “corporate social responsibility”?

Shortly, everything we do is a service to the humankind, finding energy sources, water, and minerals, are all to help improving economy and the lifestyle of our humanity. We have implemented solid policies to contribute to our society. We hire from the places we work. We add value to the local economy, and we focus in creating “In-Country-Value” by applying policies to BUY LOCAL and hire available fit services. We also provide training, not just for our employees and staff, but also to our neighboring society. As an example, we may operate areas close to farms, or the public. Our “social permit” is our passport to access lands. We interact with our neighbors on daily basis, YES, it does cause some inconvenience for our neighbors, and therefore, we have taken our social responsibility very seriously to make sure that we help and educate the public on our business and fair support to them.

As the oil and gas industry tries to move forward, what is ARGAS’s strategy for growth?

Unfortunately, the world did not invest enough in Energy Exploration. We all aim to develop sustainable energy sources, but this takes time. It’s a transition and it takes a lot of effort until we do this. Therefore, Oil and Gas remains critical to our life: source of energy and to support the transition. The drop in exploration spends, since 2014, resulted in somehow unbalanced risks in the industry.

Today, we see demand increasing on real exploration. The challenge is to sustain affordable energy to our societies. And therefore, finding energy and improving our proven reserves is a global security.

The challenge is that, still, some of our customers use Return on Investment to measure the value of information while capitalizing their spend on exploration. This means, we are

running behind a moving target, as commodity price change. Our industry must recognize that “value of information” is much higher than just the commodity price.

ARGAS growth is driven by natural resource exploration’s demand, not just oil and gas. We are focused on Geothermal Energy, mining, and water. We add life to life. Sustainable business growth, driven by population and lifestyle.

This year, we are planning to invest more than \$300 million USD develop infrastructure, equipment, and facilities to support market demand. Our shareholders and customers are confident in the value we add to improve the success rate of any exploration program.

Harsh work environment! What are your HSE precautions?

Over the past 60 years, we maintained solid and sustainable Health, Safety, and Environmental practices. We never lost a life in an accident related to work. We had zero environmental disaster in the history of ARGAS.

This was the result of great people’s work, teamwork, hard work, and commitment driven by all employees. Our leadership example is a model that we improve on daily basis.

“Our Trace” is the name of our Code of Conduct. It was developed to the highest level of commitment toward integrity, quality and safety of our people, and the people around us. Our commitment to our society and environment is the cornerstone of our business. This is our license to operate. We take it very seriously, with zero tolerance.

Finally, would we see ARGAS in more countries soon?

ARGAS is an international company, and it’s the most mature and experienced company in our field. 60 years of action. Many other companies could not survive this business. We master it.

We offer success to our customers, better integrity of data, resulting in quality of underground imaging. Our value to our societies and people is our key enabler, as we add value to local business.

Competition could be hard, sometimes, yes, but we educate our customers. Some customer focus on the “price” of the survey, but the price of poor data is much more painful: lower success rate, poor reserves replacement ratio... name it.

We are confident that we will open new markets. Since our inception, and we operate in the Kingdom of Saudi Arabia, the leader of energy in the world: who knows more about oil? We export knowledge and best practice to global level, to enrich other markets, drive value, improve lifestyle and supply economic energy to the world. This is our inspiration.



COOPERATION PETROLEUM CO.

زيوت التعاون
جودة فائقة
تضمن لك الحماية



KORRA
ENERGI

FLARE GAS SOLUTIONS FOR A BETTER TOMORROW

Scan me



TO KNOW MORE ABOUT
KORRA ENERGI'S SOLUTIONS

**MOVING TOWARDS SUSTAINABLE
GREENER SOLUTIONS FOR DECARBONIZATION**



Flare to Power



Flare Gas Recovery
(NGL - LPG - C5+)



Gas Processing
& Gas Treatment



Carbon Capture



Hydrogen
Recovery



Power Plants



Waste Heat
Recovery



Co-generation
and Tri-generation



Waste to Energy



District Cooling

Warren Controls Offers Series 2900 Industrial Control Valves

Fig- 1 Series 2900 Industrial Control Valves



Warren Controls, a leading manufacturer of control valves and specialty fluid handling products, announces the Series 2900 industrial control valves, ideal for food and beverage, packaged water heaters, pharmaceutical, and general service applications, as well as wastewater applications with moderate pressure drops and temperatures from -20° to 400°F

The Series 2900 features rugged cast iron bodies and is available in a variety of trim materials, including bronze,

300 stainless steel, 174-pH stainless steel, and Alloy 6 (cobalt-chromium-tungsten). Available valve body styles include 2-way single seat unbalanced, 2-way cylinder balanced, 2-way double seat balanced, 3-way mixing, and 3-way diverting. The equal percentage and linear plugs in the 2-way valves and linear plugs in the 3-way valves provide excellent modulating control of a wide variety of fluids. The Series 2900 is ideally suited for applications in which value and long life are important objectives.

STROHM and EVONIK to bring TCP with Carbon Fibre PA12 to green hydrogen market



Fig-2 Strohm and Evonik thermoplastic composite pipe

Hydraulic Torque Wrench

The MXT+™ Hydraulic Torque Wrench combines the best of HYTORC's original MXT Wrench with the latest advanced technology. It delivers significant advances in industrial bolting by integrating dual-reaction technology, auto-release, integrated cycle counter and coaxial drive into one flexible tool. The cycle counter monitors tool use and schedules preventative maintenance and calibration. This feature helps maintain the tool at peak performance. The MXT+ tool is offered in a range of sizes for tackling tough bolting jobs, resulting in faster, safer and more reliable bolting. It is constructed from higher-strength materials for rugged industrial use and highly repeatable performance.



Fig-3 HYTORC's Hydraulic Torque Wrench

Composite pipe manufacturer Strohm and Evonik have signed a memorandum of understanding to develop their respective thermoplastic composite pipe (TCP) technology and unidirectional carbon fibre PA12 tape for energy transition applications, the companies said on Monday.

The global collaboration agreement between Strohm and Evonik paves the way for a green hydrogen transportation solution for offshore wind developers that is non-corrosive, has a carbon neutral manufacturing footprint, and has been qualified by DNV for dynamic and static hydrocarbon services for a lifetime of up to 30 years, the companies said in a statement.

According to Strohm, the two companies have been collaborating since 2009, with the first TCP featuring PA12 produced in 2011.

The combined technology is currently being used by conventional energy operators in North and South America, and the MoU will allow the two companies to prove its versatility for hydrogen and bring it to market, they said.

"We are very excited to sign this MoU with Evonik and start the process of developing and qualifying TCP with PA12 to support the offshore wind sector with a pipe solution to transport green hydrogen," Strohm managing director Martin van Onna said in a statement.

"We are 100% confident in its versatility and ability to support other sectors and its suitability to transport green hydrogen for offshore wind is just one application that will help drive the energy transition," he added.

Carbon Fibre PA12 TCP, with its proven fatigue resistance and superior permeation behaviour for hydrogen, is an ideal solution for surface to seabed dynamic hydrogen transport for offshore wind to hydrogen applications.

TCP is non-metallic, corrosion resistant, and insensitive to hydrogen and hydrogen embrittlement – proven and accepted in the offshore oil and gas sector as it requires no maintenance and has a long design life.

GREENHECK VEKTOR® -H LAB Exhaust Fan Receives High Wind Certification

Greenheck's Vektor®-H direct drive laboratory exhaust fan has received Miami Dade NOA and Florida Product Approval for high wind certification. All Vektor-H series models are now hurricane and high wind certified for wind-borne debris, impact resistance and wind load design pressures up to +/- 140 PSF (231 mph wind speed) without guy wires. Featuring a unique direct drive design, the Vektor-H high plume laboratory exhaust fan includes an easily accessible motor compartment that is sealed from the contaminated airstream, integral cooling vents, standard motor shaft grounding and sealed-for-life motor bearings that allow for high efficiency operation while significantly reducing overall maintenance. The Vektor-H complies with NFPA 45 and ANSI Z9.5 laboratory exhaust guidelines and is available in up to 3x1 fan systems for N+1 or N-1 redundancy. Licensed to bear the AMCA Seal for Fan Energy Index (FEI), Air and Sound Performance, the Vektor-H is ideal for high school and college laboratories, compounding pharmacies, hospital isolation rooms, and smaller laboratory or industrial applications.



Fig- 1 Greenheck's Vektor®-H direct drive laboratory exhaust fan



CODRIL™ CORE BIT

CoreAll's Intelligent Coring System and Logging While Coring tool provide real-time transmission of gamma-ray, resistivity, downhole vibration and core jam indication. The CoDril™ tool is a supplemental downhole convertible core bit, allowing the operator to select between coring and drilling modes. This saves a complete round trip to change the BHA every time.

Fig-7 The CoDril™ tool is a supplemental downhole convertible core bit that can switch between coring and drilling modes.

AutoPump AP4 High Temperature Ultra Pump



Fig-4 the AutoPump® AP4™ High Temperature Ultra Pump

Q.E.D. Environmental Systems, Inc., a leading manufacturer of innovative environmental products and subsidiary of Graco Inc., highlights the AutoPump® AP4™ High Temperature Ultra Pump for landfill and remediation pumping applications. The high-performance pump has been proven to withstand temperatures up to 250 degrees Fahrenheit (121 degrees Celcius) and increase run time between cleanings.

The design of the highly-reliable, low-maintenance AP4 Ultra pump includes specialized materials to deliver pumping performance in high-temperature landfill leachate and condensate risers and groundwater remediation wells. Proprietary non-stick finishes and electro polished surfaces in the new AP4 High Temperature Ultra pump reduce solids buildup, increasing the runtime interval and making it much faster and easier to clean; operators often need only to spray the pump with water and lightly wipe it clean. As a result, users experience longer run times, reduced maintenance costs, increased safety of service personnel and a boost in project productivity.

All non-magnetic metallic parts of the AP4 Ultra pump are 316-grade Stainless Steel with engineered polymers to resist corrosion and attacks by harsh lactates, free-phase and dissolved fuels, BTEX and MTBE. QED also offers a large selection of pump tubing and accessories rated for high-temperature applications to ensure consistent performance of the entire pump system.



MR. PIERRE OUDIN
Middle East, Market Manager



MR. SAEED OKIEL
Managing Director

FallPROTEC for the first time at EGYPS to present the highest and most advances fall protection systems to protect employees from fall hazards for oil and gas and other industries .

Fallprotec has innovation in its DNA and continuously invests into product development which enables the company to market a comprehensive range, of fall arrest and height safety systems. Fallprotec is also a one-stop shop providing services such as industrial site audits, engineering and training.

Safe Science is the sole official commercial agent for Fallprotec in EGYPT

MEET OUR INTERNATIONAL EXPERTS IN EGYPS 2023 FROM 13 - 15 FEBRUARY AT EIEC STAND NO. 3177

YOUR INTEGRATED SERVICES PROVIDER



was established late **1997** to fulfill market demands FOR

- **Specialized Maintenance Services**; Global Maintenance, Offshore, Turbines Maintenance, Specialized Technical Workshop, Static Equipment Rehabilitation, Technical Support, Facility Management and Supporting Services.
- **Construction & Modification**; Integrated Projects-EPC.Civil and Construction Projects (Onshore & Offshore), Gas Plants & Gas Compression Stations, Tanks & Pipeline Construction, Rehabilitation and Renovation of Firefighting Systems, Telecommunications and Information Technology, Power Generation Services
- **Fabrication Workshop**; Plate Work, Steelwork, Tank Fabrication, Shelters(Offshore & Enclosures).
- **Asset Integrity**; Risk Based Inspection (RBI), Reliability Center Maintenance (RCM), Fitness for Service (FFS), Corrosion & Corrosion Control Services, Traditional & Advanced NDT.
- **Complementary Services**; Engineering, Procurement, Pre-Commissioning, Commissioning, Scaffolding, Painting, Insulation (SPI), Industrial Cleaning & Hot Tapping, Lifting Works,

for Oil & Gas, Petrochemical, Power, Industrial and Transportation Section.



SUPPORTED BY



VISIT OUR BOOTH AT 2E30

www.emceg.com

New Cairo, City Admin.Center, Ninety St., Zone20
Tel.:(202)-26189999- Fax:(202)26189888

 **We Care**
Our Commitment to you



MIDCO

Oilfield Services (Free Zone)



Midco Oilfield Services Free Zone

Plot No.141,Fifth and Sixth District,Zahraa
El-Maadi,Industrial Zone

Cell :+01143259599

Tel: +202 25218062639/ Ext. 120

Fax:+202 25218635 - 25218631

info@midco-eg.com

www.midco-eg.com



AN INTERVIEW WITH

ENG. ESSAM ABD ELFATTAH MIDCO CEO



MIDCO
Oilfield Services (Free Zone)

First, We would like to highlight MIDCO (Free Zone), Your work, The Services you Provide

Midco is a leading integrated oilfield service provider, we started our journey in Egypt on 1998 and since then we have grown to provide a broad array of oil & Gas services to companies of all sizes - upstream and downstream.

Throughout our capabilities, we succeed to grow up our set of services to include: Wellhead Maintenance, Wellhead Supply, CST wellhead agent, Cold casing cutter services, Pre-heating & Welding Services, Pressure Test Services, High torque machine & Bolting Services, Drilling Management and Man power supply, Filtration Services, Sand blasting & Painting, Load Test for handling tools, Sling Test, Lifting Inspection, Tubular Inspection, Rig Inspection, Supply Blohm and Voss handling tools and Flanges and risers supply

When did MIDCO started working with petroleum sector companies

MIDCO Oilfield Services Company has been established in 1998 as a Free zone company.

What is the competitive advantage of MIDCO?

Midco adheres a leading culture of

developing our employees Skills and Knowledge; enhancing their professionalism to overcome work's obstacles and be aligned to the most up-to-date operational trends.

We have built a reputation of trust, quality and technical competency that enables us to be the preferred business partner to the majority of the oil and gas companies in Egypt and we are expanding our services to the middle east area.

Midco integrated management system is certified and fully operates with compliance of ISO 9001, ISO 45000, API Q2, LEAA full membership and preparing for API Q1. Nowadays the increasing amount of change within the oil & Gas industry creates massive challenges to us and to our customers, Midco takes a holistic approach to adapt quickly to meet customers' demand under exceptional conditions of economic turbulence and epidemic virus.

Midco believes that Safety is fundamental in every decision we make, it's the core of all our operations, We ensure safe working environment by complying to the highest HSE standards. Our highly qualified employees are working to deliver all operations as planned to meet our clients' requirements and We are working on

finding new solutions to handle operational challenges. Our motivated team focus on realizing customer satisfaction by providing superior services quality.

The last two years has been challenging, How did you face the pandemic?

- In addition to its impact on public health, (COVID-19) has caused a major economic shock.
- Despite all the risks and stress, it is important to remember that we have faced crises situations before and it is a challenge for the company's management.
- We believe that people are the most valuable asset to our business, so in crises we have to show up for the employees and support them.
- MIDCO put in place procedure and assessed the risk related to the COVID pandemic to ensure the safety of employees who have to be at work and cannot work remotely.
- MIDCO established a strategy to analyze the critical roles and key positions, and prepared temporary succession plans for key executive positions.
- MIDCO Analyzed the priority of the company's projects and critical tasks and managed them in the most effective way.

- Work through the most difficult scenarios and prepare appropriate communications for the employees.
- Update the travel and meeting policies and Re-Planning of workforce strategies

What are your recent awarded contracts in the region?

- MIDCO awarded many contracts and agreements of providing various services with number of oil and gas companies in Hi torque, cold Cutting, and well head maintenance.

What are your plans to invest more in Egypt?

- Being one of the Egyptian market leaders in the oil and gas services industry, Midco is committed to work alongside our valued customer by providing an integrated service excellency in an economic, safe, efficient and sustainable way. We envision a sustainable future by utilizing new techniques to adapt quickly with the increase in demand and to match the new contracts requirements.

In order to match our vision we have the below strategies in the coming period :

Focus on new Technology in our service

- Invest in the development of services and Update our services and products to keep up with most recent world wide trends.

Cross sell services and products

- Focus on selling additional services and products to the same customer by increasing the scope of the awarded contracts to include additional services.

Hiring more expertise

- A plan started from 2022 to be able to meet the increase in demand and to match the new contracts requirements.

How does MIDCO maintain a high technical level of its staff?

We Midco, maintain high technical level of our staff by Training; either internal or external, to improve and ensure that all employees are suitably aware and trained in all aspects of their duties, responsibilities and job functions. Identifying our training needs is one of the fundamental prerequisites for our effective development strategy to identify the knowledge and skills of our employees need to perform their work safely.

- Training is given to improve and ensure that all personnel are suitably aware and trained in all aspects of their duties, responsibilities and job functions.
- Training plan either internal or external is

put in place and implemented according to the training needs assessment and development targets.

- Identifying of our training needs is one of the fundamental prerequisites for our effective development strategy to identify the knowledge and skills of our employees need to perform their work safely.
- To help our company department(s) to identify their employees training needs, we advised using of the following standard techniques (if applicable), those are:
 - Revision of the work activities and responsibilities for all occupations.
 - Revision of the critical task analysis and procedures.
 - Revision of the underlying causes relating to lack of inadequate training of previous accidents.
 - Revision of the hazard identification and risk assessments.
 - Revision of the inspection report analysis
 - Revision of the changes in process design, work methods, equipment, materials management analysis.
 - Revision of the operating procedures
 - Revision of the applicable regulations and standards.

What about the health and safety procedures that the company follows in its production sites, especially with the continuous changes of the epidemic

- As per our QHSE Policy; MIDCO Provide and maintain safe, healthy and friendly-environment working conditions for all our employees, contractors, customers, visitors and public to ensure prevention of work-related injury, ill health & environmental pollution.
- MIDCO Considered implementing flexible and remote work options during



the pandemic period.

- MIDCO tried to Share the up-to-date and relevant information from credible sources about COVID-19 symptoms and disease prevention recommendations among company employees.
- Safety instructions and recommendations is communicated and added in a clear vision.
- We Focused on organizing a safe work environment and self-monitoring of employees' health, and disinfection of workplaces.
- Monitoring and supervision to make sure people are following controls put in place, eg following hygiene procedures, washing hands, wearing masks, keeping distance etc..
- Meetings are held either internet or on the phone where possible.
- MIDCO ensure the safety of working environments by thoroughly cleaning and disinfecting workplaces.

Engineer Essam, Midco Chairman, is continuing his development and growth measures impacting his Company members to deliver a world wide petroleum services that exceeds expectations of excellence and quality.

Contacts:

- Ms. Tabarak Essam - General Manager
- Ms. Tasneem Essam - General Manager



SHOTEC S.A.E. is a German-Egyptian engineering company specialized in trading and engineering of industrial equipment for the energy and process industry. For 25 years we are the sole agent of mainly German, Italian and American manufacturers on the Egyptian market and support our clients actively through pre-tendering consulting, engineering services as well as sales and after sales services.

Moreover, SHOTEC is a shareholder of the joint-venture "RUHRPUMPEN EGYPT", one of EGPC companies manufacturing API 610 pumps, together with ENPPI, PETROJET, NASR PETROLEUM, EGPC and RUHRPUMPEN.

Our Services:

1. Sales & Distribution

We represent over 20 renowned brands on both the Egyptian and the Gulf market and provide the best engineering solutions for the local demand.

2. Pump-Services

Shotec Service Center provides professional repair, maintenance, commissioning and start up of pumps and is the authorized Service Partner of NETZSCH and LEWA in Egypt.

3. Engineering & Packaging of Pump Systems

Design and Engineering; Assembly in local inhouse workshop; Installation, Start Up and Commissioning

NETZSCH

PC-, SCREW-,
PERISTALTIC- &
ROTARY LOBE PUMPS

LEWA
Creating fluid solutions

PLUNGER PUMPS
DIAPHRAGM PUMPS

NIKKISO

CANNED MOTOR
CENTRIFUGAL PUMPS

**RHEINHÜTTE
PUMPEN**
An ITT Brand

CHEMICAL
CENTRIFUGAL PUMPS

VOITH

MECHANICAL VARIABLE
SPEED DRIVE UNITS,
& GEAR BOXES

**BLAGDON
PUMP**

AIR OPERATED DOUBLE
DIAPHRAGM PUMPS

**VIKING
PUMP**
A Unit of KOB Corporation

PULSATION DAMPENERS

CHETRA

MECHANICAL SEALS

KTR

COUPLINGS

FOX

GEAR PUMPS
SELF PRIMING PUMPS

WOLONG

ELECTRIC MOTORS

SCHORCH

ELECTRIC MOTORS

**BROOK
CROMPTON**

ELECTRIC MOTORS

ATB
Technology in Motion

ELECTRIC MOTORS

GE INDUSTRIAL MOTORS
WOLONG

ELECTRIC MOTORS

OLTI

HEAT EXCHANGERS &
AIR COOLERS

**PM
PIPING**
Project Materials GmbH

PIPING BULK MATERIALS

GROTH
CORPORATION
Systematic for
Cooperation

TANK SAFETY
ACCESSORIES

SMI
Transfer complete

LOADING ARMS

PRO-DO-MIX

MIXERS & AGITATORS

BORSIG 7M
COMPRESSION

GAS COMPRESSORS

HEAT
energy

GAS PRESSURE
REGULATING SYSTEMS

GVC
Globe

BALL VALVES

SCAM TPE
SCOTTON'S PACKAGE EQUIPMENT S.A.

COOLING TOWERS



TransGlobe Energy CORPORATION

TransGlobe Energy Corporation is a publicly-traded oil exploration and production company whose activities are concentrated in Egypt and Canada

www.trans-globe.com

GROWTH WITH ENERGY



An Interview With

MR. RANDALL C. NEELY, C.A., CFA

President and CEO, Director
TransGlobe Energy Corporation



TransGlobe Energy
CORPORATION

Can we update our readers insight on the TransGlobe strategy in light of the current oil market?

Given the ongoing oil price volatility, TransGlobe is continually focused on strict capital discipline through operational cost controls and minimizing our exposure to financial leverage by remaining debt-averse. Despite market volatility, we have positioned ourselves as a nimble company with the ability to create value through a balanced portfolio of exploitation, development and exploration opportunities across our diversified onshore assets in Egypt and Canada. This approach has enabled us to build our production base, generate strong cash flows and provide a return to shareholders through a semi-annual dividend.

Where are the most promising areas / concessions the company is working in?

We are most excited about our low-risk development operations in Egypt and our newly discovered resource potential in the Cardium play in Alberta. In Egypt we are particularly focused on the continued expansion of our Eastern Desert Concessions. For the past year plus we have been working alongside the Egyptian General Petroleum Company ("EGPC") to develop a framework to extend the concessions and amend our licenses which will provide for the increased development and recovery of the oil in place in those legacy concessions through increased secondary as well as tertiary recovery approaches. We believe that some of the techniques utilized in our

Canadian operations, namely horizontal drilling and multi-stage completions will be directly applicable to certain areas within our concessions in the Eastern Desert.

TransGlobe has been working in Egypt for more than a decade, what are some attractions in the Egyptian petroleum sector?

The production and distribution of oil is an integral part of Egypt's economy and the country has developed a well-established service industry to support exploration and development operations, exemplified by an increasingly large and talented workforce. This presents an exciting opportunity for TransGlobe to operate within. Addition-

ally, we are very encouraged by the leadership within the Ministry and EGPC who continue to work towards a modernization of the industry which we believe will lead to a stronger and more investible operating environment once completed.

What is the amount of TransGlobe's 2019 allocated budget here in Egypt with reference to other countries? And how many wells do you plan to drill during the current calendar year?

Our 2020 capital program equates to \$37.1 million (before capitalized G&A), which includes \$23.7 million for Egypt and \$13.4 million (C\$17.4 million) for Canada. This plan is strategically aimed at maximizing free cash flow to direct at future value growth opportunities in Egypt and outside of Egypt. As a result of the recent de-risking of the area we refer to as South Harmattan, we can deploy capital in Canada, to achieve our production and cash flow goals in 2020 while we await finalization of our concession consolidation efforts in the Eastern Desert in Egypt.

What is the operational update on the South Ghazalat exploration?

Production was initiated at South Ghazalat on 24 December 2019 from the SGZ-6X well following the installation of production facilities at site. Initial oil production was in the range of a field estimated 800-1,000 bopd, however, the gas oil ratio rapidly increased to a level that interfered with the ability to separate oil from water in the facilities. This, combined with prudent management practices on the upper Bahariya reservoir completed in this well, has led to the well now being produced at a restricted field estimated 300-400 bopd. The lower Bahariya reservoir also tested oil in this well and remains a future recompletion target. We have a rig contracted to drill both a follow-up well in the 6X discovery pool as well as an exploration well in a prospect to the East of the existing discovery later this year.

What is the growth strategy of TransGlobe worldwide and in Egypt?

We are primarily focused on development and production with a core view of generating strong cash flows and long-term value accretion. By steering the bulk of the company's efforts towards stable production, we have been able to create a uniquely competitive position in the market. Given our strength in maximizing recoveries from under-loved and under-developed

assets, we look to capitalize on our core skillsets to improve field rejuvenation possibilities by looking to expand our operations in Egypt or similar regions through synergistic acquisitions. Through this approach we hope to triple our production output and more importantly cash flow in the medium term. Having said that, having a little exploration success along the way is always welcome.

Do you see your recent success in Canada having you refocus to a more Canadian centered business going forward?

We re-entered Canada in 2016 in order to diversify our portfolio of development assets and gain exposure to the increasing technological advancements in North American drilling and completion techniques. Our Canadian re-entry was part of the Company's ongoing strategy of portfolio diversification into countries with attractive netbacks to support growth. This decision inevitably played to our core strength of value creation through development drilling and reservoir management. Recently, we have had some success in our South Harmattan area. This success provides more balance to our portfolio but we still see the real prize in the portfolio in the potential resources that could be pursued in the Eastern Desert if the Company has both the right fiscal terms and adequate time; which are the key elements of the restructuring work being discussed with EGPC.

How will your plans change if the recent fall in oil prices turns into a prolonged return to low prices?

We have been able to weather unpredictable markets by maintaining control over our own operations and focusing on opportunities where we can operate most efficiently. Because we are the operator of all our Egyptian assets and the majority of our Canadian assets, we can react quickly if oil prices shift materially. We're not forced to push ahead when it isn't favorable to do so and we can therefore control our costs accordingly. We believe there is potential for much stronger oil prices in the not-to-distant future and the key to success is being in a position to capitalize on those prices when they occur. We are also optimistic that the current sell-off in oil prices due to the potential for lower Chinese demand will be short lived.

You have recently had some key people in your organization depart and have added

some new names, can you tell us a little about that transition?

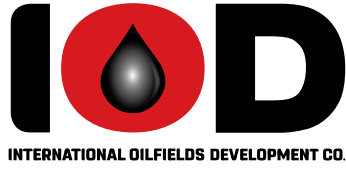
After a 20+ year career with TransGlobe, Mr. Lloyd Herrick retired recently; Lloyd is one of the finest individuals I have ever worked with in my career. He was truly dedicated to our shareholders, our partners and loved by our employees, he will be dearly missed. In anticipation of Lloyd's retirement, we were fortunate enough to hire Mr. Geoff Probert last spring. Mr. Probert is a highly skilled professional Engineer with over 30 years of experience, much of which in North Africa including Egypt. Geoff has already made a valuable contribution to the Company assisting in the efforts of our consolidation and in particular advancing our understanding of the contingent resource potential within the Eastern Desert lands.

Finally, we would like to know about TransGlobe's ESG initiatives that you can share with us.

TransGlobe has been supporting the Ras Gharib hospital for many years, as a recipient of choice as suggested by our joint venture employees. Our production assets are close to city of Ras Gharib on the Gulf of Suez and a large number of our joint venture employees live in Ras Gharib and have a strong attachment to the hospital. In 2013, TransGlobe provided support to fund the establishment of the first intensive care unit at the hospital and we continue to support the unit with donations to fund the acquisition of specialist heart and lifesaving equipment on a regular basis. TransGlobe makes donations to the hospital whenever a significant HSE achievement is reached so that we are improving safety continually as well as supporting an essential local facility in Ras Gharib.

In addition to this, TransGlobe has 2 staff members on the CSR committee, which is a subcommittee of the Egypt Oil and Gas Technical Committee. Although only recently formed, this committee is already very active in liaising with other IOC's to share and align CSR activities across the industry.

We have additional plans to decrease our emissions in the Eastern Desert which will become viable once our consolidation efforts have been concluded. We look forward to discussing these with the industry, the public and our investors once we have concluded that consolidation.



Together We Get Bigger



International Oilfields Development Company **IOD** shall begin a new era of development after the new announcement of the acquisition of Mr. Mubarak Al-Habshan The founder of **CAYAN** Oil Company in Saudi Arabia during 2022.

Mr. Mubarak Al-Habshan has a new vision for **IOD** development to achieve a sustainable superiority as a premium services provider in the oil & gas industry all over MENA region.

Number of experts in multi-oilfield services has been selected to join **IOD** for this new challenge to share their experiences in the new development vision.

About IOD

International Oilfields Development Company **IOD** was founded originally in 1991 as one of the first national companies in Egypt to provide a wide range of oilfield services in support of the national petroleum industry. **IOD** prides itself on delivering superior service quality and solutions to its customers all over its fields.

As a leader in Slickline and Memory Gauges services in Egypt, **IOD** has a distinguished highly professional staff who keep focusing on customers' needs and challenges through acquiring any required new skills and qualifications to keep **IOD** ahead in the oil & gas industry.





Sincerely Yours,
Mohamed Farouk El Dessouky
CEO

Our Vision

To excel as a high-performance growth-oriented international service company.

Our Mission

It is our mission to deliver the best value to our customers by working to maximise recovery from the well via the most economic methods available.

Who we are

Apex Well-Tech are constantly evolving and adapting to the demands of our customers and the fluctuations of the Oil & Gas industry, demonstrating our flexibility and desire to provide seamless services. We are excited to announce the launch of **Well Testing Services**. Our new Well Testing Services promises to deliver the best service quality and cost effectiveness, aligning with industry expectations. We have recently hired experienced testing personnel who have extensive field knowledge from well environments around the globe, particularly in the MENA market, with focus on Egypt and the KSA

Our Services:

Apex Well-Tech Services will provide a diverse range of Testing arrangements , including :

- **Exploration and Appraisal Well Testing.**
- **Extended Well Tests (EWT).**
- **Early Production Systems.**
- **Production Allocation & Routine Well Testing.**
- **Sand Exclusion.**
- **Frac Flow Back & Well Clean up.**
- **Fluids & Sampling Services.**
- **Data Acquisition**

Office: 42 El-Orouba Street, New Maadi, Cairo, Egypt.

Tel.: +202 2704 6500 Fax: +202 2704 5400

Warehouse & workshop: Shabramant, Giza.

Tel.: +202 2704 6500 Fax: +202 2704 5400

Email: welltech@apex.me

www.apex.me



A 10 - POINT PLAN TO REDUCE THE EUROPEAN UNION'S RELIANCE ON RUSSIAN NATURAL GAS

Measures implemented this year could bring down gas imports from Russia by over one-third, with additional temporary options to deepen these cuts to well over half while still lowering emissions. Europe's reliance on imported natural gas from Russia has again been thrown into sharp relief by Russia's invasion of Ukraine on 24 February. In 2021, the European Union imported an average of over 380 million cubic metres (mcm) per day of gas by pipeline from Russia, or around 140 billion cubic metres (bcm) for the year as a whole. As well as that, around 15 bcm was delivered in the form of liquefied natural gas (LNG). The total 155 bcm imported from Russia accounted for around 45% of the EU's gas imports in 2021 and almost 40% of its total gas consumption.

Progress towards net zero ambitions in Europe will bring down gas use and imports over time, but today's crisis raises specific questions about imports from Russia and what policy makers and consumers can do to lower them. This IEA analysis proposes a series of immediate actions that could be taken to reduce reliance on Russian gas, while enhancing the near-term resilience of the EU gas network and minimising the hardships for vulnerable consumers.

A suite of measures in our 10-Point Plan, spanning gas supplies, the electricity system and end-use sectors, could result in the EU's annual call on Russian gas imports falling by more than 50 bcm within one year – a reduction of over one-third. These figures take into account the need for additional refilling of European gas storage facilities in 2022 after low Russian supplies helped drive these storage levels to unusually low levels. The 10-Point Plan is consistent with the EU's climate ambitions and the European Green Deal and also points towards the outcomes achieved in the IEA Net Zero Emissions by 2050 Roadmap, in which the EU totally eliminates the need for Russian gas imports before 2030.

We also consider possibilities for Europe to go even further and faster to limit near-term reliance on Russian gas, although these would mean a slower near-term pace of EU emissions reductions. If Europe were to take these additional steps, then near-term Russian gas imports could be reduced by more than 80 bcm, or well over half.

The analysis highlights some trade-offs. Accelerating investment in clean and efficient technologies is at the heart of the solution, but even very rapid deployment will take time to make a major dent in demand for imported gas. The faster EU policy makers seek to move away from Russian gas supplies, the greater the potential implications in terms of economic costs and/or near-term emissions. Circumstances also vary widely across the EU, depending on geography and supply arrangements.

Reducing reliance on Russian gas will not be simple, requiring a concerted and sustained policy effort across multiple sectors, alongside strong international dialogue on energy markets and security. There are multiple links between Europe's policy choices and broader global market balances. Strengthened international cooperation with alternative pipeline and LNG exporters – and with other major gas importers and consumers – will be critical. Clear communication between governments, industry and consumers is also an essential element for successful implementation.

1

No new gas supply contracts with Russia

- Gas import contracts with Gazprom covering more than 15 bcm per year are set to expire by the end of 2022, equating to around 12% of the company's gas supplies to the EU in 2021. Overall, contracts with Gazprom covering close to 40 bcm per year are due to expire by the end of this decade.
- This provides the EU with a clear near-term window of opportunity to significantly diversify its gas supplies and contracts towards other sources, leveraging the options for imports provided by its large LNG and pipeline infrastructure.

Impact

Taking advantage of expiring long-term contracts with Russia will reduce the contractual minimum take-or-pay levels for Russian imports and enable greater diversity of supply.

2

Replace Russian supplies with gas from alternative sources

- Complementing the point above, our analysis indicates that production inside the EU and non-Russian pipeline imports (including from Azerbaijan and Norway) could increase over the next year by up to 10 bcm from 2021. This is based on the assumptions of a higher utilisation of import capacity, a less heavy summer maintenance schedule, and production quotas/caps being revised upwards.
- The EU has greater near-term potential to ramp up its LNG imports, considering its ample access to spare regasification capacity. LNG trade is inherently flexible, so the crucial variables for the near-term are the availability of additional cargoes, especially those that have some contractual leeway over the destination, and competition for this supply with other importers, notably in Asia.
- The EU could theoretically increase near-term LNG inflows by some 60 bcm, compared with the average

levels in 2021. However, all importers are fishing in the same pool for supply, so (in the absence of weather-related or other factors that limit import demand in other regions) this would mean exceptionally tight LNG markets and very high prices.

- Considering current forward prices and the LNG supply-demand balance, we have factored into our 10-Point Plan a 20 bcm increase in the EU's LNG imports over the next year. The timely procurement of LNG can be facilitated by enhanced dialogue with LNG exporters and other importers, increased transparency, and efficient use of capacities at LNG regasification terminals.
- The increases in non-Russian pipeline and LNG deliveries assume a concerted effort to tackle methane leaks, both across Europe, where leaks are estimated at 2.5 bcm a year from oil and gas operations, and among other non-European suppliers - especially those that flare significant quantities of gas today.
- There is limited potential to scale up biogas and biomethane supply in the short term because of the lead times for new projects. But this promising low-carbon sector offers important medium-term upside for the EU's domestic gas output. The same consideration applies to production of low-carbon hydrogen via electrolysis, which is contingent on new electrolyser projects and new low-carbon generation coming online. Increased output of low-carbon gases is vital to meet the EU's 2030 and 2050 emissions reduction targets.

Impact

Around 30 bcm in additional gas supply from non-Russian sources

3

Introduce minimum gas storage obligations to enhance market resilience

- Gas storage plays a key role in meeting seasonal demand swings and providing insurance against unexpected events, such as surges in demand or shortfalls in supply, that cause price spikes. The value of the security provided by gas storage is even greater at a time of geopolitical tensions.
- The current tight seasonal price spreads in European gas markets do not provide sufficient incentive for storage injections ahead of the 2022 - 23 heating season, as demonstrated by the results of the recent gas storage

capacity auctions in the EU. A harmonised approach to minimum storage obligations for commercial operators in the EU's single gas market, together with robust market-based capacity allocation mechanisms, would ensure the optimal use of all available storage capacity in the EU.

- Our analysis, based on the experience of recent years, suggests that fill levels of at least 90% of working storage capacity by 1 October are necessary to provide an adequate buffer for the European gas market through the heating season. Given the depleted levels of storage today, gas injection in 2022 needs to be around 18 bcm higher than in 2021.
- Regional coordination of gas storage levels and access can provide an important element of solidarity among EU member states and reinforce their gas supply security ahead of the next winter season.

Impact

Enhances the resilience of the gas system, although higher injection requirements to refill storage in 2022 will add to gas demand and prop up gas prices

4

Accelerate the deployment of new wind and solar projects

- In 2022, record additions of solar PV and wind power capacity and a return to average weather conditions are already expected to increase the EU's output from these renewable sources by over 100 terawatt-hours (TWh), a rise of more than 15% compared with 2021.
- A concerted policy effort to fast-track further renewable capacity additions could deliver another 20 TWh over the next year. Most of this would be utility-scale wind and solar PV projects for which completion dates could be brought forward by tackling delays with permitting. This includes clarifying and simplifying responsibilities among various permitting bodies, building up administrative capacity, setting clear deadlines for the permitting process, and digitalising applications.
- Faster deployment of rooftop solar PV systems can reduce consumer bills. A short-term grant programme covering 20% of installation costs could double the pace of investment (compared with the IEA's base case forecast) at a cost of around EUR 3 billion. This would increase annual output from rooftop solar PV systems by up to 15 TWh.

Impact

An additional 35 TWh of generation from new renewable projects over the next year, over and above the already anticipated growth from these sources, bringing down gas use by 6 bcm.

5

Maximise generation from existing dispatchable low-emissions sources: bioenergy and nuclear

- Nuclear power is the largest source of low emissions electricity in the EU, but several reactors were taken offline for maintenance and safety checks in 2021. Returning these reactors to safe operations in 2022, alongside the start of commercial operations for the completed reactor in Finland, can lead to EU nuclear power generation increasing by up to 20 TWh in 2022.
- A new round of reactor closures, however, would dent this recovery in output: four nuclear reactors are scheduled to shut down by the end of 2022, and another one in 2023. A temporary delay of these closures, conducted in a way that assures the plants' safe operation, could cut EU gas demand by almost 1 bcm per month.
- The large fleet of bioenergy power plants in the EU operated at about 50% of its total capacity in 2021. These plants could generate up to 50 TWh more electricity in 2022 if appropriate incentives and sustainable supplies of bioenergy are put in place.

Impact

An additional 70 TWh of power generation from existing dispatchable low emissions sources, reducing gas use for electricity by 13 bcm.

6

Enact short-term measures to shelter vulnerable electricity consumers from high prices

- With today's market design, high gas prices in the EU feed through into high wholesale electricity prices in ways that can lead to windfall profits for companies. This has

significant implications for the affordability of electricity, as well as for the economic incentives for the broader electrification of end-uses, which is a key element of clean energy transitions.

- We estimate that spending by EU member states to cushion the impact of the energy price crisis on vulnerable consumers already amounts to a commitment of around EUR 55 billion.
- Increases in electricity costs are unavoidable to a certain extent when gas (and CO₂) prices are high. But current wholesale markets create the potential for profits for many electricity generators and their parent companies that are well in excess of the costs related to operations or capital recovery. Current market conditions could lead to excess profits of up to EUR 200 billion in the EU for gas, coal, nuclear, hydropower and other renewables in 2022.
- Temporary tax measures to raise rates on electricity companies' windfall profits could be considered. These tax receipts should then be redistributed to electricity consumers to partially offset higher energy bills. Measures to tax windfall profits have already been adopted in Italy and Romania in 2022.

Impact

Brings down energy bills for consumers even when natural gas prices remain high, making available up to EUR 200 billion to cushion impacts on vulnerable groups.

7

Speed up the replacement of gas boilers with heat pumps

- Heat pumps offer a very efficient and cost-effective way to heat homes, replacing boilers that use gas or other fossil fuels. Speeding up anticipated deployment by doubling current EU installation rates of heat pumps would save an additional 2 bcm of gas use within the first year, requiring a total additional investment of EUR 15 billion.
- Alongside existing policy frameworks, targeted support for investment can drive the scaling up of heat pump installations. Ideally, this is best combined with upgrades of the homes themselves to maximise energy efficiency gains and reduce overall costs.
- Replacing gas boilers or furnaces with heat pumps is also an attractive option for industry, although deployment may take longer to scale up.

- A shift from gas to electricity for heating buildings could have the corresponding effect of pushing up gas demand for power generation, depending on the situation. However, any increase would be much lower than the overall amount of gas saved. Such a shift would also transfer seasonal swings in demand from the gas market to the power market.

Impact

Reduces gas use for heating by an additional 2 bcm in one year.



Accelerate energy efficiency improvements in buildings and industry

- Energy efficiency is a powerful instrument for secure clean energy transitions, but it often takes time to deliver major results. In this plan, we consider how to pick up the rate of progress, focusing on measures that can make a difference quickly.
- At present, only about 1% of the EU's building stock is renovated each year. A rapid extension to an additional 0.7%, targeting the least efficient homes and non-residential buildings, would be possible through standardised upgrades, mainly via improved insulation. This would save more than 1 bcm of gas use in the space of a year and would also bring benefits for employment, though it would require parallel efforts to improve supply chains for materials and workforce development.
- This boost to the near-term rate of building retrofits and heat pump deployment accelerates changes that are part of EU policy frameworks. By 2030, the European Union's Energy Efficiency Directive and Energy Performance of Buildings Directive, within the Fit for 55 framework, are projected to reduce gas demand in buildings by 45 bcm per year compared with today.
- Many households are installing smart heating controls (smart thermostats) to reduce energy bills and improve home comfort, and this is a simple process that can be scaled up quickly. Tripling the current installation rate of about one million homes per year would reduce gas demand for heating homes by an extra 200 mcm a year at a total cost of EUR 1 billion. These devices can be incentivised through existing programmes such as subsidies to households or utility obligation schemes.

- Annual maintenance checks of gas boilers can be used to ensure hot water boilers in homes are set at a temperature that optimises efficiency, no higher than 60 °C.
- Helping small businesses (SMEs) become more efficient will save energy and also help protect those businesses from price volatility. Many EU states have effective programmes to offer energy efficiency audits and advice to SMEs that can save energy quickly and effectively. Scaling these up to offer them to 5% of SMEs would deliver immediate annual energy savings of 250 mcm.

Impact

Reduces gas consumption for heat by close to an additional 2 bcm within a year, lowering energy bills, enhancing comfort and boosting industrial competitiveness.



Encourage a temporary thermostat adjustment by consumers

- Many European citizens have already responded to Russia's invasion of Ukraine in various ways, via donations or in some cases by directly assisting refugees from Ukraine. Adjusting heating controls in Europe's gas-heated buildings would be another avenue for temporary action, saving considerable amounts of energy.
- The average temperature for buildings' heating across the EU at present is above 22°C. Adjusting the thermostat for buildings heating would deliver immediate annual energy savings of around 10 bcm for each degree of reduction while also bringing down energy bills.
- Public awareness campaigns, and other measures such as consumption feedback or corporate targets, could encourage such changes in homes and commercial buildings. Regulations covering heating temperatures in offices could also prove to be an efficient policy tool.

Impact

Turning down the thermostat for buildings' heating by just 1°C would reduce gas demand by some 10 bcm a year.

10

Step up efforts to diversify and decarbonise sources of power system flexibility

- A key policy challenge for the EU in the coming years is to scale up alternative forms of flexibility for the power system, notably seasonal flexibility but also demand shifting and peak shaving. For the moment, gas is the main source of such flexibility and, as such, the links between gas and electricity security are set to deepen in the coming years, even as overall EU gas demand declines.
- Governments therefore need to step up efforts to develop and deploy workable, sustainable and cost-effective ways to manage the flexibility needs of EU power systems. A portfolio of options will be required, including enhanced grids, energy efficiency, increased electrification and demand-side response, dispatchable low emissions generation, and various large-scale and long-term energy storage technologies alongside short-term sources of flexibility such as batteries. EU member states need to ensure that there are adequate market price signals to support the business case for these investments.
- Flexibility measures to reduce industrial electricity and gas demand in peak hours are particularly important to alleviate the pressure on gas demand for electricity generation.
- Domestically sourced low-carbon gases – including biomethane, low-carbon hydrogen and synthetic methane – could be an important part of the solution, but a much greater demonstration and deployment effort will be required.

Impact

A major near-term push on innovation can, over time, loosen the strong links between natural gas supply and Europe's electricity security. Real-time electricity price signals can unlock more flexible demand, in turn reducing expensive and gas-intensive peak supply needs.

Going faster and further – additional fuel switching options in the power sector

Other avenues are available to the EU if it wishes or needs to reduce reliance on Russian gas even more quickly – but with notable trade-offs.⁵ The main near-term option would

involve switching away from gas use in the power sector via an increased call on Europe's coal-fired fleet or by using alternative fuels – primarily liquid fuels – within existing gas-fired power plants.

Given that these alternatives to gas use would raise the EU's emissions, they are not included in the 10-Point Plan described above. However, they could displace large volumes of gas relatively quickly. We estimate that a temporary shift from gas to coal or oil-fired generation could reduce gas demand for power by some 28 bcm before there was an overall increase in the EU's energy-related emissions.

The larger share of this potential decrease in gas demand would be possible through gas-to-coal switching: an additional 120 TWh in coal-fired generation could cut gas demand by 22 bcm in one year. In addition to opportunities to run on biomethane, nearly a quarter of the EU's fleet of gas-fired power plants is capable of using alternative fuels – nearly all in the form of liquid fuels. Taking advantage of this capability could displace another 6 bcm of natural gas demand a year, depending on sufficient financial incentives to switch fuels and the availability of those fuels.

If this fuel-switching option were to be fully exercised in addition to the complete implementation of the 10-Point Plan described above, it would result in a total annual reduction in EU imports of gas from Russia of more than 80 bcm, or well over half, while still resulting in a modest decline in overall emissions.



EL NEEL

Petroleum Marketing Co.



El-Neel was founded in 2005 with the main purpose and vision of Petroleum products marketing...

Mineral oils, lubricants, aviation fuel and bunkering through a work system that satisfies Upper Egypt cities needs

Company activities

Gas stations

El-Neel gas stations are widely spread on main roads and new cities which provide all petroleum services and products on 24/7 basis

Premiere Clients

El-Neel succeeded in providing its clients with high quality standards petroleum products and deals with premiere customers such as (Electricity sector- Transportation sector – FMCGs – paper companies – cement companies- Department of mechanics and electricity)

Mineral oils and lubricants

El-Neel is following the international quality standards in production and marketing all types of mineral oils and lubricants



Bunkering

El-Neel is licensed to work in all Egyptian ports; competing with national and international companies with international standards

Aviation

The company provides safe and secured platforms in refueling aircrafts in Assuit, Sohag and El Alamin airports. El-Neel works effortlessly in aviation fueling staff training and competency enhancement to achieve the highest levels of safety and quality in providing airport equipment and supplies.

Transportation

El-Neel owns and manages a GPS tracked fleet of trucks with various capacities to insure a safe and quick delivery of petroleum products to satisfy its clients' needs

Our core interests

Health and Safety

Managing health, safety and environment is a top priority at El-Neel; we work in a structured and documented manner to ensure a safe organization with minimal risk and zero injuries and accidents. Prevention and protection is our approach to ensure our staff safety and to achieve optimum work processes to prevent environmental damage as well as guarantee the safety of all involved parties.

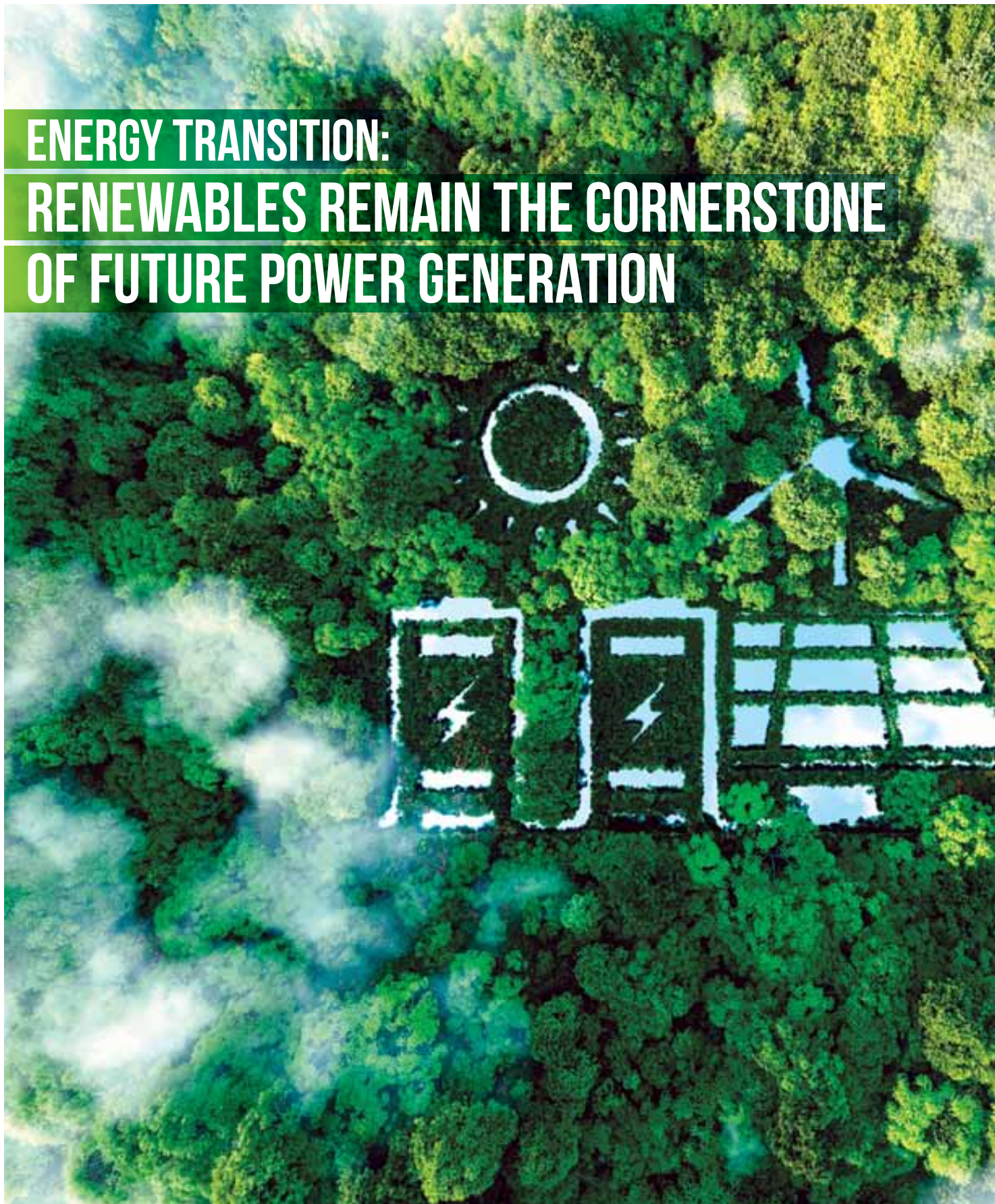
Human resources

El-Neel believes that the human factor is the most valuable asset in which it invests generously to train and enhance competencies to improve their efficiency in order to keep continuous development.

Information technology

El-Neel uses the latest technology to keep communication lines running smoothly and efficiently both internally and with our clients to ensure the best resources optimization as well as customer satisfaction by adopting SAP system, ERP, GPS monitored trucks and ATG controlled tanks.

**ENERGY TRANSITION:
RENEWABLES REMAIN THE CORNERSTONE
OF FUTURE POWER GENERATION**





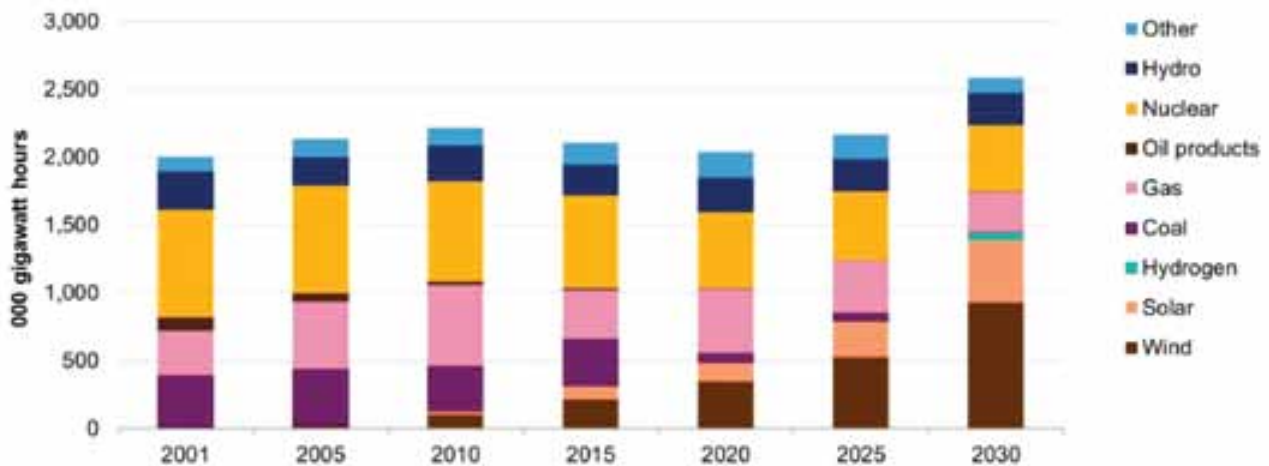
Renewable energy sources (solar, wind, and hydro) account for the majority of annual investments in power generation. Yet they still represented only 13% of global primary energy consumption in 2020, according to S&P Global Commodity Insights (Platts). Climate policies, cost competitiveness, and the strategies of power companies and investors will likely help this share increase to 18% by 2030 (two-thirds wind and solar, one-third hydro). This means that, by then, renewable energy could equate 60% of the primary energy previously sourced from oil, versus only about 25% a decade ago.

The growth and importance of renewables in the power generation mix is however significantly higher. S&P Global Commodity Insights (Platts)' reference scenario puts the share of renewables in 2030 at more than 60% of the power mix in Western Europe, up from around 35% today, and 38% each in the U.S. (up from 23%) and China (up from 30%). As part of that increase, the projected expansion of solar and wind capacity is even more impressive, almost doubling this decade to 47% by 2030 in Europe (versus 25% in 2020), 32% in the U.S. (up from 12%), and 24% in China (up from 11%).

Capacity Additions Lag Energy Demand Growth And A 2 Degree Pathway

Despite ongoing growth in renewables, gas- and coal-fired power generation continues to rise. This is due to steadily increasing power demand in developing markets (notably China and India), combined with global electrification trends, such as switching to electric vehicles and demand from a growing number of data centers including for bitcoin mining. What's more, in many markets there are still few incentives to build new renewables capacity to replace older fossil-fuel power plants that are fully depreciated, and the cost of carbon is not fully accounted for, in our view.

Western Europe's Power Generation Mix



CCUS--Carbon capture, usage, and storage. Source: S&P Global Commodity Insights - Global Integrated Energy Model

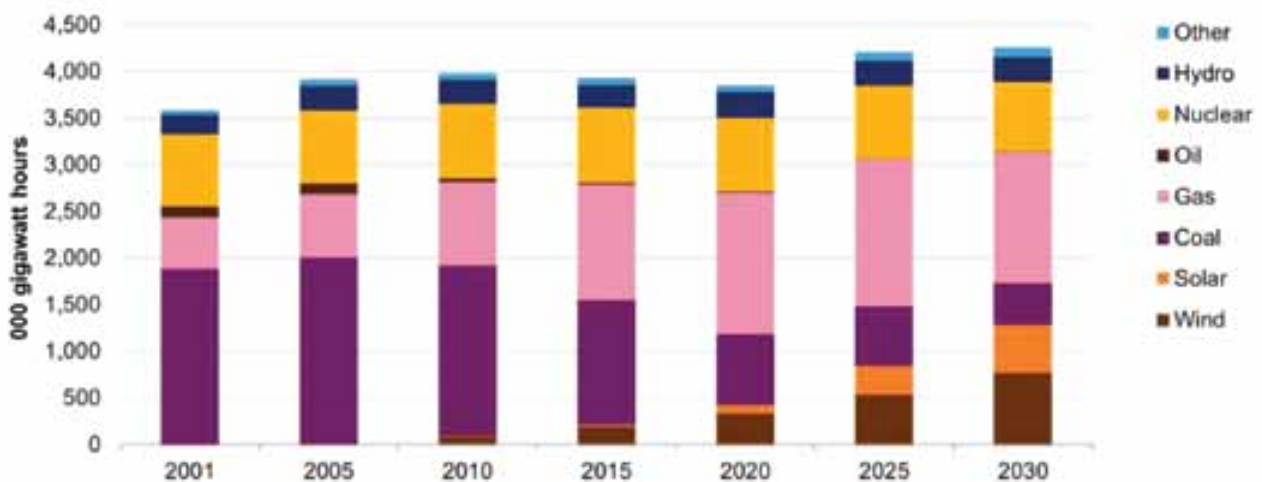
Accelerating the expansion of renewables generation, in line with limiting global warming to less than 2 degrees per year, would require significant additional momentum beyond market economics. S&P Global Commodity Insights' (Platts) 2-degree scenario would require renewable energy generation from solar, wind, and hydro in 2050 to be almost double that expected in the reference case.

Supportive Policies Remain Needed To Foster Growth

Renewable power generation has become competitive, especially in the current environment where fossil fuel prices are at record highs. However, we see that the solar and wind power industry still requires wide-ranging policies that foster further growth, including investment in auxiliary technologies such as storage, grid

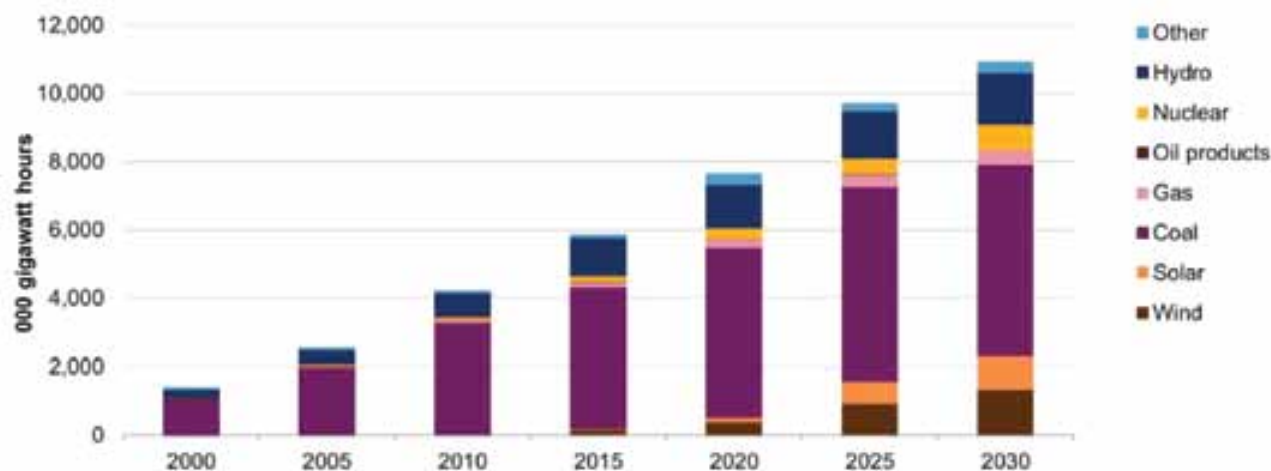
upgrades, and interconnections. For example, attaining permits for renewables projects is often cited as a major hurdle in the U.S. and Europe. To address this, and in view of the urgency resulting from the Russian gas crisis, Europe's recent REPower EU plan now includes a proposal for «renewables go-to zones» and initiatives to limit legal recourse against new generation plants and grid buildups, as in Germany.

U.S. Power Generation Mix



Source: S&P Global Commodity Insights - Global Integrated Energy Model

China's Power Generation Mix



Source: S&P Global Commodity Insights - Global Integrated Energy Model

S&P Global Ratings believes policies to facilitate long-term price visibility for renewables investments are key to reducing credit risks and financing costs. In the U.S., credit-supportive price visibility is often provided through power purchase agreements with utilities, which often result from renewable portfolio standards set by states. In Europe, a competitive auction process is mostly used for renewables, which has yielded a fixed price outcome or contracts for difference over 15 - 20 years and essentially acts as a swap of a long-term spot price into a fixed price, rather than as a subsidy. Even though the cost of renewables has decreased, and is now competitive relative to that of other power generation sources, any unmitigated exposure to long-term power prices (and hourly capture rates) would unlikely be in line with investment-grade credit characteristics. This is because such exposure would make cash flows of renewable projects subject to significant uncertainty, similar to those of other merchant-type power projects. S&P Global Commodity Insights (Platts) expects power prices in Western Europe to decline sharply over the next decade, assuming gas prices start returning to normal levels. This is because of the

rising share of zero- or low-marginal-cost plants in the generation mix.

Key renewables objectives for Europe, the U.S., and China by 2030

Russia's invasion of Ukraine has added new impetus for Europe to double down on its energy transition targets.

The goal of reducing dependence on Russian gas and promoting energy independence now complements the region's push toward net zero. The REPowerEU strategy has raised the target for the share of renewables (including hydro) to meet energy demand to 45%, compared with 40% in the previous «Fit for 55» plan. To this end, REPowerEU aims to have 1,236 gigawatts (GW) of wind and solar generation capacity online by 2030, up from about 350 GW of installed capacity today.

In the U.S., the increasing bifurcation of political views is hampering support for climate-oriented policies.

A recent U.S. Supreme Court decision curtailed -- though did not end -- the Environmental Protection Agency's ability to regulate power sector GHG emissions under the Clean

Air Act. From the standpoint of renewable energy growth, the budget reconciliation agreement, known as the Inflation Reduction Act of 2022, opens the door to clean energy investments across the next decade, including new and expanded clean energy tax credits. This notwithstanding, renewables growth in the U.S. should remain underpinned by cost competitiveness and decarbonization strategies of many utility companies. Moreover, state legislation, such as renewable portfolio standards is not affected by the court's decision. Based on S&P Global Commodity Insights (Platts)' reference case, we foresee installed wind and solar capacity reaching 510 GW by 2030, up from 225 GW at the end of 2021.

We expect that China will deliver on or surpass the target in its recently announced 14th five-year plan.

The plan includes a target of renewables (excluding hydro) to cover 18% of primary energy consumption by 2025. This requires 1,100 GW of installed wind and solar power capacity, almost double the currently installed capacity of about 640 GW (330 GW from wind and 307 GW solar photovoltaic) at year-end 2021, and is already close to the official target of 1,200 GW by 2030. Given

that China has been adding 100 GW of renewables capacity per year, its 2030 target is therefore well within reach and likely to be exceeded. The power market is mainly led by state-owned enterprises with limited funding issues.

Reliance On China For Equipment And Raw Materials Poses Risks

Recent supply chain issues have hampered renewables growth, but we believe this should be more manageable in the medium term. Despite accounting for about half of global annual installations, China dominates the global solar supply chain. High dependence on China for raw materials key to the energy transition has also been underscored by the International Energy Agency (see chart 4).

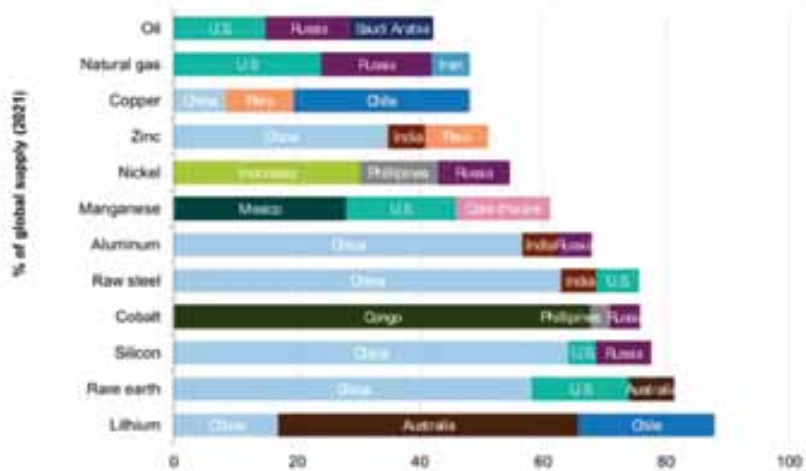
There is, however, no one-to-one comparison with dependence on oil- or gas-producing countries, since once renewable power plants are installed, the dependence on China reduces significantly because wind and solar are indigenous fuel sources. Still, U.S. and European governments are already considering alternative suppliers outside China as well as the onshoring of key strategic investments, such as batteries and related lithium mining semiconductors, and photovoltaic solar panels.

Grid Stability And Affordability Will Remain High On The Political Agenda

As more fossil fuel plants close due to age or environmental mandates, and the share of renewables in the power mix expands, there will be a need for flexible dispatchable power that addresses the intermittent nature of renewables. Low-carbon solutions, including batteries can address short-term supply needs but are unlikely to cope with major seasonal fluctuations in energy demand.

However, these solutions still come with a high price tag, which needs to be added to the cost of renewable generation to arrive at an all-in

Top Three Mining Countries
Total mineral and material production compared to fossil fuels



Source: International Energy Agency, U.S. Geological Survey.

cost of providing firm power that is available at all times. The more likely interim solution, therefore, may be to steadily increase the contribution from renewables, while adding gas-fired peaking plants or providing a capacity payment mechanism to existing gas- or coal-fired plants to allow them to act as back-up capacity and be available during periods of low power output from renewables.

Likewise, interconnections will play a key role in reducing intermittency risks, since they link markets with different resource mixes. For example, in Europe there is significant renewables generation in Denmark (74% of total generation in 2021), but grid stability is supported by a comprehensive interconnection network across the region, which is now even being expanded with the U.K. The development of such networks requires, however, long commissioning time frames.

Affordable and reliable power is likely to be an increasing area of focus for all countries.

The European Commission and Parliament have just approved certain (peak) natural gas power plants to

be designated as green sustainable investments.

- In the U.S., California--where renewables now account for 33% of power generation--could delay the closure of the Diablo Canyon nuclear plant after the state faced rolling blackouts and increased fluctuations in renewable output. Other states that have a lower proportion of renewables are also running into issues. The mid-continent region operator, MISO, has just issued a warning about blackouts for Michigan and there have been some deferrals of coal retirements.
- China is supporting coal supply in 2022 to ensure power stability, but factoring into the equation an affordable energy transition. Last year, the country's commercial and industrial sectors experienced power shortages. China is using a combination of tariffs and measures such as «dual-control» (see «China will establish dual control system for cutting emissions, carbon intensity: Xi,» published Jan. 27, 2022, on spglobal.com) to fuel growth of renewables while still supporting firm power from coal.



PAN MARINE GROUP

YOUR ONE-STOP SERVICE PROVIDER



Pan Marine Group provides full local support services to the Oil, Gas and Energy industry through our subsidiaries all over Egypt, our services are tailored as per our clients' requirements including but not limited to:

- Provision of Offshore Support Vessels (AHTS, PSV, CSV, ERRV, Tugs, and Crew Boats).
- Provision of Offshore Drilling Rigs.
- Supply Base Logistics.
- Pipe-laying Projects.
- Offshore Full Motion Compensated Gangways.
- Supplier of International Oilfield Machinery, Equipment, and Chemicals.
- Free Zone Warehouse Facility.
- Provision of Diving and ROV Services.
- Marine Agency Services.
- Project and Military Permits.
- Vessels & Rigs Importation and Exportation.
- Bunkering, Lube Oil and Fresh Water Supply.
- Repairs, Maintenance & Dry Docking Services.
- Catering & Provisions Supplies.
- Integrated Logistics and Freight Forwarding Services.
- Sea & Air Freight.
- Customs Clearance and Brokerage Services.
- Inland Transportation.
- Supply of Local Crew Manning Services.
- Equipment Rental.
- Project Cargos.

 **EGYPS**
EGYPT PETROLEUM SERVICES

13 - 15 FEBRUARY 2023
EGYPT INTERNATIONAL EXHIBITION CENTER

SUPPORTED BY



VISIT US AT STAND
2D40 at Hall 2



EGYPT ANALYSIS EXECUTIVE SUMMARY

Egypt is the third-largest natural gas producer in Africa, following Algeria and Nigeria. Egypt operates the Suez Canal and the Suez-Mediterranean (SUMED) Pipeline, which are important transportation infrastructure in international energy markets. The Suez Canal is a transit route for oil and liquefied natural gas (LNG) shipments traveling northbound from the Persian Gulf to Europe and to North America. Shipments traveling southbound from North Africa and from countries along the Mediterranean Sea to Asia also move through the Suez Canal. Fees collected from these two transit points are significant sources of revenue for the Egyptian government.

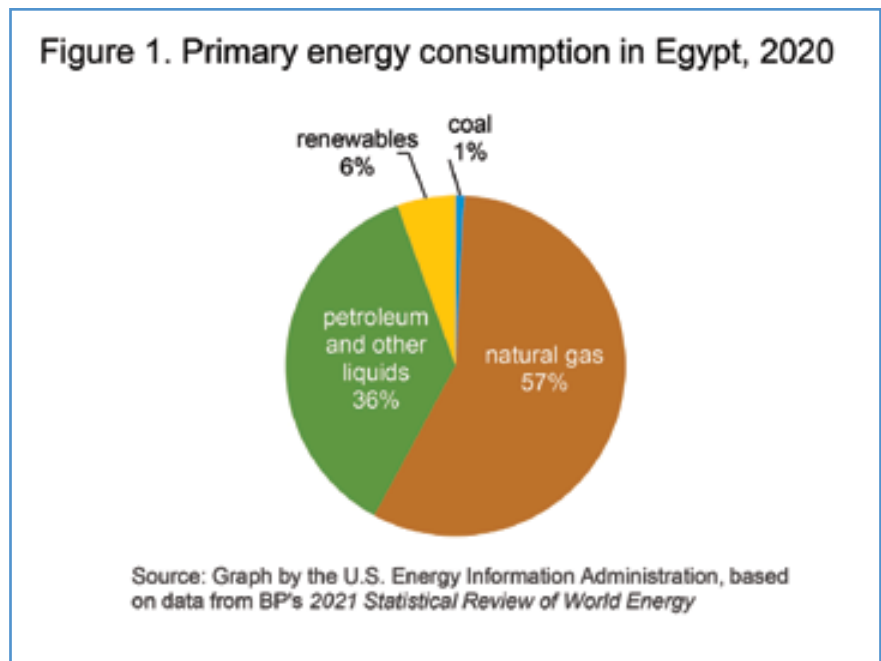
Sector organization

According to Egypt's Ministry of Petroleum, five state-owned enterprises (SOE) manage the petroleum sector:¹

- Egyptian General Petroleum Corporation (EGPC)
- Egyptian Natural Gas Holding Company (EGAS)
- Egyptian Petrochemicals Holding Company (ECHEM)
- Egyptian Mineral Resources Authority (EMRA)
- Ganoub El-Wadi Holding Company (Ganope)

ECHEM develops the petrochemical sector, and EMRA assesses mineral resources and geological mapping of the country.² EGPC and Ganope both manage upstream oil activities and issue upstream licenses. Ganope focuses on activity in the southern region, while EGPC manages development in the rest of the country.³ EGAS oversees the development, production, and marketing of natural gas and also organizes international exploration bid rounds and awards natural gas exploration licenses. EGAS and EGPC work with international companies to establish joint venture companies that develop and operate oil and natural gas fields. The government earns revenue directly through royalty payments and indirectly through production-sharing agreements between the international companies and the relevant SOE (EGAS or EGPC).⁴

In the petroleum sector, Eni and Apache Energy are significant international oil and gas companies in terms of overall production volume, according to Rystad Energy's estimates over the past 10 years. Eni and Apache compete alongside both domestic oil companies, such as EGPC and PICO Cheiron



Group, as well as other national oil companies, such as Sinopec, Eni, BP, Apache, and Shell lead the natural gas sector. However, some SOEs such as Rosneft and Petronas also participate, although at smaller overall production volumes.⁵

The Egyptian government is trying to attract more investors to develop underexplored areas and boost crude oil and natural gas production. In 2019, the government held a licensing round for 10 exploration blocks located in the Red Sea, but only awarded licenses for Blocks 1, 3, and 4 to Chevron, Shell, and jointly to Shell and Mubadala Petroleum, respectively.⁶ In 2021, the government held another licensing round to award licenses for 24 exploration blocks located in the Western Desert, the Gulf of Suez, the Nile Delta, and the Mediterranean Sea, areas which already have significant production of crude oil and natural gas. The government announced bid winners in January 2022; however, it only awarded eight blocks. Eni received exploration licenses to five blocks, and the other bid winners were BP, Apex International Energy, and United Energy.

Energy consumption

According to the latest estimates in BP's 2021 Statistical Review of World Energy, the most consumed fuels in Egypt were petroleum and other liquids (36%) and natural gas (57%) in 2020. Renewable energy and coal accounted for 6% and 1%, respectively, of the country's total consumption for the same year (Figure 1). Coal is primarily used in Egypt's industrial sector.⁸

Petroleum and other liquids

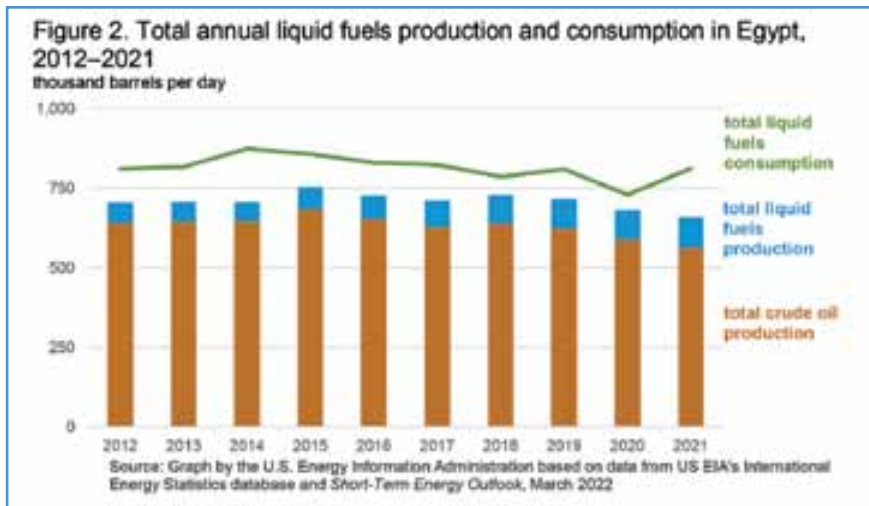
Exploration and production

- According to the Oil & Gas Journal (OGJ), Egypt held proved oil reserves of 3.3 billion barrels as of January 2021.⁹
- Egypt has three main crude oil blends. The Suez and Belayim blends come from aging offshore fields in the Gulf of Suez and are

Table 1. Selected crude oil blends from Egypt

| Crude oil blend | API gravity | Sulfur content |
|-----------------|-------------|----------------|
| Suez | 30.4 | 1.65 |
| Belayim | 27.5 | 2.20 |
| Western Desert | 41.1 | 0.34 |

Source: Table by the U.S. Energy Information Administration, based on data from the Egypt Oil & Gas Group



refined domestically, with only small quantities exported. The Suez and Belayim blends are medium, sour crude oil grades. The Western Desert blend comes from the newer onshore fields in the Western Desert and is a light, sweet crude oil (Table 1).¹⁰

- Total liquid fuels production in 2021 was an estimated 660,000 barrels per day (b/d), about 561,000 b/d was crude oil and lease condensate (Figure 2).¹¹
- Egypt's total liquid fuels consumption currently outpaces its oil production. Egypt's total liquid fuels production has benefited from higher natural gas liquids production from the large offshore natural gas fields that came online in the mid-2010s. However, overall total liquid fuels production has been declining because of a lack of significant crude oil discoveries in recent years.¹²

Transport and storage

- The Suez Canal and the Suez-Mediterranean (SUMED) Pipeline are two major routes and transit chokepoints for crude oil and LNG shipments, and they give Egypt a significant role in global crude oil and natural gas trade. If both the Suez Canal and the SUMED Pipeline close, tankers would have to divert around the southern tip of Africa, adding approximately 8–15 days of

transit to the United States or Europe and leading to increased shipping costs.¹³

- Egypt has crude oil storage facilities located at the Ain Sukhna and Sidi Kerir terminals, which are located at the beginning and the end of the SUMED pipeline. The Sidi Kerir terminal, located on the Mediterranean, has 27 storage tanks with a total capacity of 20 million barrels, while the Ain Sukhna terminal (located on the Red Sea) has 15 floating storage tanks with a total capacity of 10 million barrels.¹⁴

Refining and refined oil products

- According to the EGPC, eight refineries with a total nameplate capacity of approximately 762,000 b/d exist in Egypt (Table 2).¹⁵
- According to Egypt's Minister of Petroleum and Mineral Resources, the MIDOR refinery plans to expand and modernize by 60,000 b/d. This project is expected to be completed in the first quarter of 2022, adding an additional crude oil distillation unit, a vacuum distillation unit, a diesel hydrotreater, and a hydrogen unit. This

project, which will cost about \$2.3 billion, will also increase operational efficiency and production capacity by upgrading and integrating other existing units. TechnipFMC received the engineering, procurement, and construction contract in 2018.¹⁶

- The Assiut refinery plans to expand and modernize its facilities to add a new naphtha complex and hydrocracking complex. According to NS Energy Business, this project is scheduled to be completed by 2022 and will likely require an investment of about \$2.5 billion.¹⁷

Petroleum and other liquids exports

- In 2021, Egypt imported about 127,000 b/d of crude oil and condensate and exported about 98,000 b/d (Figure 3). Over half of Egypt's crude oil exports went to India, and the remainder went to China and countries in Europe (Figure 4).²⁰

Natural gas

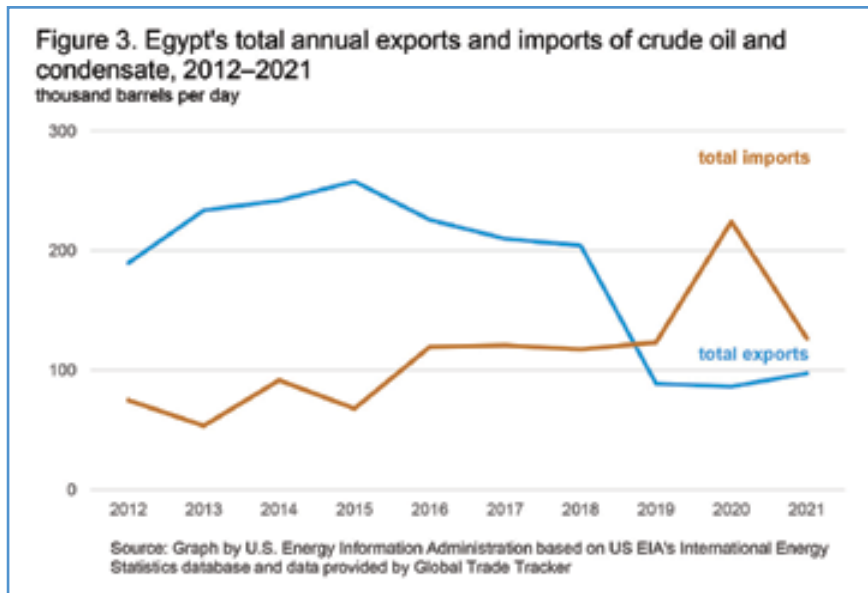
Exploration and production

- According to OGJ, Egypt held 63 trillion cubic feet (Tcf) of proved natural gas reserves as of January 2021.²¹
- Egypt produced about 2.3 Tcf of dry natural gas in 2019 and consumed about 2.1 Tcf in that same year (Figure 5). Egypt's natural gas production rose significantly

Table 2. Egypt's existing refineries

| Refinery name | Operator | Location | Nameplate capacity (barrels per day) |
|---------------------|-----------------------------------|------------------|--------------------------------------|
| El-Near refinery | El-Near Petroleum Company | El-Suez | 111,000 |
| Mutrosud refinery | Egypt Refining Company | Mutrosud (Cairo) | 161,000 |
| Alexandria refinery | Alexandria Petroleum Company | Alexandria | 330,000 |
| MIDOR refinery | Middle East Oil Refinery | Alexandria | 160,000 |
| Amanya refinery | Amanya Petroleum Refining Company | Amanya | 60,000 |
| Suez refinery | Suez Petroleum Processing Company | El-Suez | 60,000 |
| Assiut refinery | Assiut Petroleum Refining Company | Assiut | 90,000 |
| Tanta refinery | Cairo Petroleum Refining Company | Tanta | 40,000 |
| Total | | | 762,000 |

Source: Table created by the U.S. Energy Information Administration, based on data from the Egyptian General Petroleum Corporation company website

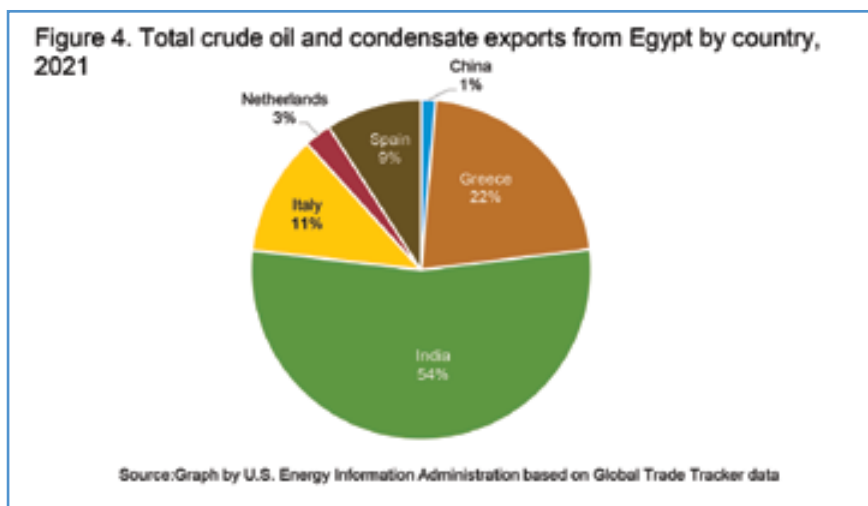


as a result of large natural gas discoveries in the mid-2010s, such as the Zohr, Atoll, and West Nile Delta projects that were fast-tracked for development. Natural gas consumption, meanwhile, has remained relatively flat, allowing Egypt to export some of its surplus natural gas via pipelines and as LNG.²³

- Egypt's Zohr field reached its peak production of 1.1 Tcf per year in February and March 2021, but technical problems have decreased its production; water breakthrough issues decreased output at the field to about 876 Bcf–912 Bcf per year. Eni (the operator) and its concession

partners (Rosneft, BP, and Mubadala Petroleum) plan to drill additional wells to increase capacity, but the outcome remains uncertain. The West Nile Delta development's Raven project, brought online in April 2021, also has not reached its stated capacity of 329 Bcf per year, producing about 219 Bcf per year as of June 2021. The lower-than-expected output from Egypt's recent natural gas discoveries may slow natural gas production growth.²⁴

- In July 2020, Eni announced a new natural gas discovery at the Bashrush well in the North El Hammad concession, Greater Nooros area, located offshore in the Mediterranean.



Initial testing at the well placed production estimates at about 11.7 Bcf per year. Eni is planning to coordinate with its concession partners—BP, TotalEnergies, and EGAS—to quickly develop the field and bring its production online. The Bashrush discovery is the latest significant addition to some of the offshore discoveries made in the last decade in the Mediterranean that have boosted Egypt's total natural gas production.²⁵

Transport and storage

Pipelines

- The Arab Gas Pipeline (AGP) is a natural gas pipeline that originates in Arish, Egypt, and connects to Israel, Jordan, Syria, and Lebanon. Sabotage or attacks by militant groups have repeatedly disrupted AGP's transport of natural gas since its construction. The AGP, which has a reported capacity of 234 Bcf per year, currently supplies natural gas from Egypt to Jordan at between 26 Bcf and 44 Bcf per year. Lebanon is currently repairing its connection to the pipeline to restart natural gas imports from Egypt and plans to complete the repairs by March 2022.²⁶
- Israel and Egypt are reportedly planning to build a natural gas pipeline onshore that could provide up to an additional 177 Bcf per year. The proposed natural gas pipeline would be the second between the two countries—the first being the subsea Eastern Mediterranean Gas (EMG) Pipeline that runs from Ashkelon in Israel to Arish in Egypt. The EMG pipeline has a nameplate capacity of about 318 Bcf and transports natural gas from Israel's offshore fields to Egypt for domestic consumption or export.²⁷

LNG

- Egypt currently has two LNG export

facilities, the Spanish-Egyptian Gas Company (SEGAS) LNG facility and the Egyptian LNG facility (ELNG). SEGAS LNG is a single LNG train located in Damietta on the Mediterranean coast. Since the start of commercial operations in 2004, Egypt underutilized SEGAS LNG, leading to the plant's closure in December 2012 as a result of growing domestic energy demands. The plant restarted LNG exports in February 2021 after Eni, Naturgy, and the government of Egypt and its SOEs reached an agreement to restart the plant.²⁸ ELNG is located at Idku and has two LNG trains. ELNG began production in May 2005, but like the SEGAS LNG, the facility experienced a temporary shut-in in 2015 as a result of high domestic demand for natural gas and insufficient feedstock for the facility to export (Table 3).²⁹

- Egypt has one floating storage and regasification unit (FSRU), provided by BW Gas, and it is located at the SUMED port. BW Gas FSRU began operating commercially in September 2015. Egypt's other FSRU, provided by Höegh, left the country in October 2018 after Egypt terminated its charter. Egypt reportedly maintains one FSRU to ensure security of natural gas supplies.³⁰

Natural gas exports

- Egypt primarily exports its natural gas as LNG, although in 2018, it began exporting natural gas to Jordan via the AGP. Historically Egypt has been a net exporter of natural gas, but in the mid-2010s, Egypt had to import natural gas to meet increasing domestic consumption. Egypt's total natural gas exports have steadily increased since 2016, after some of its recent natural gas discoveries began producing, which created a surplus of natural gas for the country to export. Egypt's natural gas imports

Table 3. Egypt's liquefaction terminals

| Project Name | Ownership | Start date | Location | Capacity (billion cubic feet per year) |
|--------------|--|------------|----------|--|
| SEGAS LNG | Eni (50%); EGAS (40%); EGPC (10%) | 2004 | Damietta | 266 |
| Egyptian LNG | Train 1 - Shell (35.5%); Petronas (35.5%); EGAS (12%); EGPC (12%); TotalEnergies (5%) Train 2 - Shell (38%); Petronas (38%); EGAS (12%); EGPC (12%) | 2005 | Idku | 346 |
| Total | | | | 612 |

Source: Table by the U.S. Energy Information Administration, based on data from the Global Energy Monitor, Hydrocarbons Technology, NS Energy Business, Eni company website

declined to nearly zero by 2019 after reaching a record high of 294 Bcf in 2016; Egypt exported about 177 Bcf in 2019, according to US EIA's latest estimates.³¹

- Egypt exported about 64 Bcf of LNG in 2020, according to the latest estimates provided by BP's 2021 Statistical Review of World Energy. Most of Egypt's LNG went to countries in the Asia Pacific region, with Pakistan, China, and Taiwan as the three largest importers. The United Kingdom also imported about 6 Bcf, or 10%, of Egypt's total exports in 2020 (Figure 6).³²

Electricity

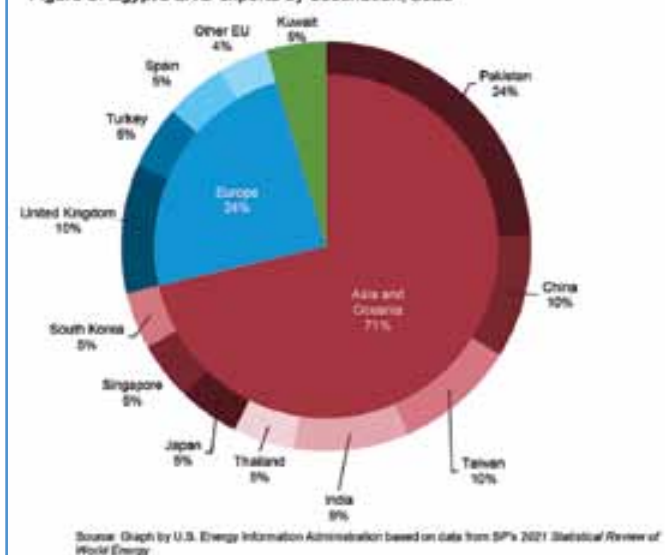
Sector organization

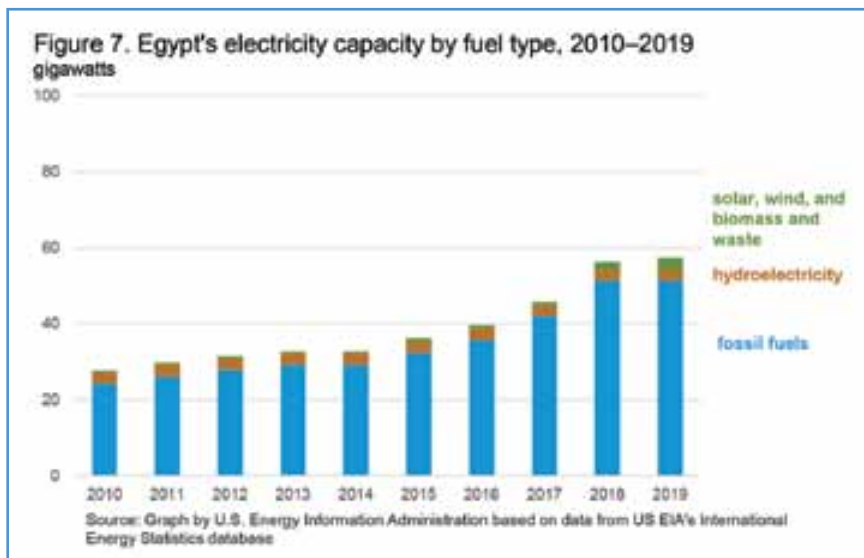
- The Ministry of Electricity and Renewable Energy (MOEE) oversees the generation, transmission, and distribution segments. The Egyptian Electricity Holding Company (EEHC) SOE oversees activities in the power sector through its subsidiaries. Five of EEHC's subsidiaries manage the generation

segment, and the EEHC and the Egyptian Electricity Transmission Company (EETC) manage the transmission segment. Nine other subsidiaries of the EEHC manage the distribution segment. The Egyptian Electricity Utility and Consumer Protection Regulatory Agency is the main power market regulator responsible for setting electricity tariffs, and the MOEE provides oversight on the other authorities operating in the electricity sector, such as the New and Renewable Energy Authority, the Atomic Energy Authority, and the Hydropower Plant Executive Authority.³³

- In February 2015, the government approved a law (the Electricity Law No. 87 of 2015, or the 2015 Electricity Law) that aimed to encourage transparency in the power

Figure 6. Egypt's LNG exports by destination, 2020





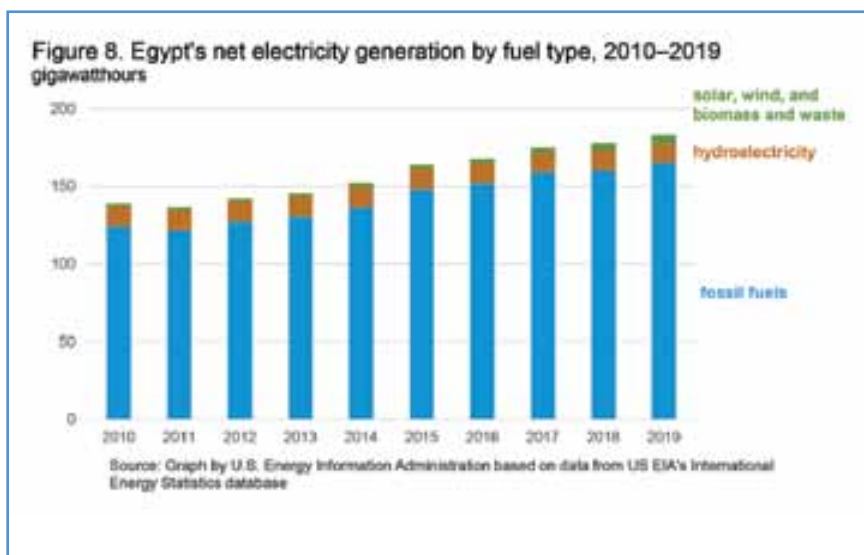
market and attract private sector participation in the generation, transmission, and distribution segments. The 2015 Electricity Law shifts the power sector from state-directed management to regulatory management, which could potentially increase private-sector investment. The 2015 Electricity Law grants an initial period of eight years to develop and implement these measures, which recently was extended to 2025.³⁴

- Egypt can develop renewable energy resources given its solar potential and high wind speeds, particularly in the Gulf of Suez and the Nile Valley. The Egyptian government looks to

capitalize on these potential resources with renewable energy power projects in its latest energy policy plan, the 2035 Integrated Sustainable Energy Strategy. The 2035 Strategy emphasizes developing renewable energy sources and sets a long-term goal to increase renewables' share, particularly solar and wind, to 42% by 2035.³⁵

Power generation and capacity

- Egypt has a total installed capacity of 57 gigawatts (GW) and generated about 183 gigawatthours (GWh) in 2019. Fossil fuel-derived sources accounted for approximately 90%



of total power generation capacity in Egypt, and hydropower and renewable sources made up the remainder, at about 5% each of total capacity. Egypt does not use any coal for power generation. (Figure 7 and Figure 8).³⁶

- Egypt's electricity grid connects to transmission grids in Libya, Jordan, and Syria under the Eight Countries Electric Interconnection Project. This project is still under development, and on completion, will connect the remaining partner countries involved in the project—Iraq, Lebanon, Palestine, and Turkey.³⁷
- The government also seeks to develop additional cross-border transmission interconnections to electricity grids to enable Egypt to become a regional hub for electricity. The governments of Egypt and Jordan signed an agreement to double the current interconnection capacity of 500 MW to enable Egypt to begin supplying electricity to Iraq through its connection with Jordan. Egypt and Saudi Arabia are also planning to construct a 3 GW electricity cable between the two countries and awarded contracts to build out some of the infrastructure in October 2021. The first phase of the Egypt-Saudi Arabia interconnector cable is expected to be completed by 2024 and to reach full capacity in 2025.³⁸

Hydropower

- Hydropower is Egypt's third-largest energy source after fossil fuel-derived sources. Most of the country's hydroelectricity comes from the Aswan High Dam and the Aswan Reservoir Dams across the Nile River. The Egyptian government plans to replace some of the turbines at the Aswan High Dam and Aswan Low Dam to rehabilitate the infrastructure and to improve efficiency at the facility.³⁹

▪ Ethiopia’s plans to build the 5.2 GW Grand Ethiopian Renaissance Dam (GERD) on the Blue Nile River have prompted concerns about water shortages to Egypt’s Aswan High Dam and the effects on industries that depend on the Nile River as a water source in Egypt. GERD can hold up to 2.6 trillion cubic feet of water, and once completed and operational, GERD will be the largest hydropower plant in Africa. Interstate dialogue between Ethiopia and downstream nations Egypt and Sudan has failed to resolve the issues surrounding the construction of GERD and the resulting economic and environmental impact the dam will have once it becomes fully operational.⁴⁰

Solar and Wind

▪ According to the International Trade Administration, Egypt has developed a series of largescale wind farms in

the past two decades, with a total capacity of 1.2 GW, and plans to develop additional wind power projects in the Gulf of Suez and Nile Banks area, allocating approximately 4,900 square miles to construct wind farms. In August 2020, the government awarded a contract to Vestas Wind Systems to construct a 250 MW wind farm located in the Gulf of Suez. Hitachi Energy, which is building the infrastructure to integrate the wind farm into the national power grid, expects this project to be completed by 2023.⁴¹

▪ Egypt’s solar park in Benban in the Western Desert region was completed in 2019, and it has a total capacity of about 1.7 GW. A consortium led by the International Finance Corporation provided initial financing of \$653 million for the construction of the initial 13 solar power plants in October

2017, and the European Bank for Reconstruction and Development has provided additional financing for the construction of more solar power plants at the Benban solar park.⁴²

Nuclear

▪ Egypt maintains a nuclear research program and operates two research nuclear reactors although the nuclear research reactor at Inshas is shut down.⁴³

▪ Egypt has no commercial nuclear power but seeks to add nuclear power to its energy mix. The Egyptian government has signed a preliminary agreement with Russia’s state nuclear corporation, Rosatom, to build and operate Egypt’s first commercial nuclear power plant in El-Dabaa. However, construction of the 4.8 GW plant has been delayed, and it is unlikely that the plant will be operational in the near or medium term.⁴⁴

1. “Organizational Structure of the Petroleum Sector,” Arab Republic of Egypt, Ministry of Petroleum, accessed January 24, 2022.
2. “About the Commission,” the Egyptian General Authority for Mineral Resources, accessed January 24, 2022, <http://www.petroleum.gov.eg/en/AboutMinistry/Pages/Heirarchy.aspx>. Egyptian Petrochemicals Holding Company, accessed January 24, 2022.
3. “About Us,” South Valley Egyptian Petroleum Holding Company (Ganope), accessed January 24, 2022. “About EGPC,” Egyptian General Petroleum Corporation, accessed January 24, 2022.
4. “Vision and Mission,” Egyptian Natural Gas Holding Company, accessed January 24, 2022. “About EGPC,” Egyptian General Petroleum Corporation, accessed January 24, 2022. Girgis Abd El-Shahid and Asmaa Badawy, “The Oil and Gas Law Review: Egypt,” *The Law Reviews*, November 3, 2021, accessed February 28, 2022. Olfat Kamel, Mostafa El Shazly, “The Egyptian upstream petroleum sector: legal analysis of joint operating companies,” *Egypt Oil & Gas*, November 6, 2016.
5. Analysis based on data taken from Rystad Energy UCube Browser, accessed January 28, 2022.
6. “Supermajors take the lead in Egyptian Red Sea,” Rystad Energy, December 30, 2019.
7. “Egypt Oil & Gas Report, Q4 2021,” Fitch Solutions Country Risk & Industry Research, November 2021. “Regional Trends Report: North Africa,” Rystad Energy, November 2021. Nermina Kulovic, “Egypt launches new licensing round to keep up medium-term gas output,” Rystad Energy, February 23, 2021. “Eni scoops up bulk of acreage in Egypt’s first online licensing round,” Rystad Energy, January 13, 2022. “Exploration Trends Report: February 2022,” Rystad Energy, February 2022.
8. BP 2020 Statistical Review of World Energy, accessed 9/20/2025/. Sarah Matthews and Amanda Flint, “Egypt 2019 thermal coal imports rise 31% on cement sector demand,” *S&P Global Platts*, January 16, 2020.
9. *Oil & Gas Journal*, “Worldwide Look At Reserves and Production,” [Table], December 7, 2020.
10. “Light Crude vs. Heavy Crude: A Continuously Narrowing Gap,” *Egypt Oil & Gas Group*, September 9, 2018. Crude blend qualities are defined as sweet or sour, and as light, medium, or heavy based on their API gravity and sulfur content utilizing our criteria on crude oil blend characteristics; see Corrina Ricker, et al. “Changing quality mix is affecting crude oil price differentials and refining decisions,” *Today in Energy*, September 21, 2017.
11. U.S. Energy Information Administration. International Energy Statistics database, accessed 6 / 10 / 2020.
12. “Egypt Oil & Gas Report, Q4 2021,” Fitch Solutions Country Risk & Industry Research, November 2021. “Egypt Oil Output Plumbs New 40-Year Low For August,” *Middle East Economic Survey*, October 15, 2021.
13. “World Oil Transit Chokepoints,” U.S. Energy Information Administration, July 25, 2017. Lejla Villar and Mason Hamilton, “Three important oil trade chokepoints are located around the Arabian Peninsula,” *Today in Energy*, U.S. Energy Information Administration, August 4, 2017.
14. “Egypt Oil & Gas Report, Q4 2021,” Fitch Solutions Country Risk & Industry Research, November 2021.
15. “Refineries,” Egyptian General Petroleum Corporation, accessed January 24, 2022.
16. “Middle East Refinery Expansion,” *NS Energy Business*, accessed January 25, 2022. “Technip FMC awarded major contract for MIDOR refinery project,” *Hydrocarbon Processing*, November 1, 2018. “Middle East Oil Refinery (Midor), Alexandria,” *Hydrocarbons Technology*, accessed January 25, 2022. “Egypt’s MIDOR refinery expansion will open in Q1 2022: Petroleum Minister,” *Daily News Egypt*, March 22, 2021.

17. "Assiut Oil Refinery Upgrade Project," NS Energy Business, accessed January 25, 2022. "Egypt firms to build atmospheric distillation facility at Assiut Refinery," Offshore Technology, October 13, 2021.
18. "Project Overview," Egyptian Refining Company, accessed January 24, 2022. "ERC Mostorod Refinery," NS Energy Business, accessed January 24, 2022. "Al-Sisi Inaugurates New Mostorod Project Worth \$4.3 B," Egypt Oil & Gas Group, September 28, 2020. "Egyptian Refining Company Delays Production to 2018Q2," Egypt Oil & Gas Group, March 2, 2017.
19. "Egypt to build \$7.5bn petrochemical complex in Ain Sokhna industrial zone," NS Energy Business, April 29, 2021. Robert Brelsford, "Egypt advances plan for new refining, petrochemicals complex," Oil & Gas Journal, May 5, 2021. Sam Hashmi, "Egypt signs deal to build \$7.5bn petrochemical complex," Argus Global Media, April 29, 2021.
20. Our analysis based on International Energy Statistics database and trade data provided by Global Trade Tracker, accessed February 10, 2022. Jasmine Shaheen, "Egypt Oil Imports Increase by 135.2% in February 2020," Egypt Oil & Gas, May 10, 2020. Egypt Country Profile, Middle East Economic Survey, accessed February 14, 2022.
21. Oil & Gas Journal, "Worldwide Look At Reserves and Production," [Table], December 7, 2020.
22. U.S. Energy Information Administration, International Energy Statistics database, accessed January 27, 2022.
23. "Zohr Gas Field," Offshore Technology, accessed January 27, 2022. "Egyptian gas sector poised for growth," Newbase, Afroil Issue 721, Week 1, January 9, 2018. "Eni strikes Zohr sale deal," Newbase, Afroil Issue 730, Week 10, March 13, 2018. "BP begins production from Egypt's Atoll gas field seven months ahead of schedule," BP press release, February 12, 2018, accessed January 27, 2022. "BP announces start of production from West Nile Delta development achieving first gas eight months ahead of schedule and production 20 percent above plan," BP press release, May 10, 2017, accessed January 27, 2022.
24. "Egypt's Zohr Struggles with Water Breakthrough," Middle East Economic Survey, June 11, 2021. "Egypt: Condensate Output Record as Gas Slumps," Middle East Economic Survey, June 11, 2021. "BP's Raven: Delayed Start Hikes Egypt Gas To New Highs," Middle East Economic Survey, April 30, 2021. "Raven Gas Field: Egypt," Offshore Technology, May 10, 2021.
25. "Eni expands Egypt's Great Nooros area with Bashrush discovery," Rystad Energy, July 2, 2020. "Eni successfully tests Egypt's Bashrush discovery in North El Hammad concession in Mediterranean Sea," Oil & Gas Middle East, July 30, 2020. "Eni: Bashrush discovery, in North El Hammad concession in Mediterranean Sea of Egypt, tested with success," Eni press release, July 28, 2020.
26. Jennifer Gnana, "Explainer: what is the Arab Gas Pipeline and why it matters," The National News, September 8, 2021. "Repairs to Arab Gas pipeline should be completed by end-Feb, Lebanese minister says," Reuters, December 29, 2021.
27. "Arish-Ashkelon Pipeline," Global Energy Monitor, accessed February 9, 2022. "Israel begins exporting natural gas to Egypt," Al-Jazeera Media Network, January 15, 2020. "Israel, Egypt plan new gas pipe that could boost Europe supplies: Israeli ministry," Al-Arabiya News, October 22, 2021.
28. "Damietta Segas LNG Terminal," Global Energy Monitor, accessed February 10, 2022. "SEGAS Liquefied Natural Gas Complex, Damietta," Hydrocarbons Technology, accessed February 10, 2022. "Eni closes agreement with partners for restart of Damietta liquefied natural gas plant in Egypt and amicable settlement of Union Fenosa Gas disputes," Eni press release, March 10, 2021.
29. "Egyptian LNG Terminal," Global Energy Monitor, accessed February 10, 2022. "Egyptian LNG Project: Idu," NS Energy Business, accessed February 10, 2022.
30. "Egypt: BW Singapore FSRU moves to port in Sumed," Offshore Energy Business, June 7, 2017. "Hoegh Gallant LNG carrier leaves Egypt, sets U.S. destination," Reuters, October 18, 2017.
31. U.S. Energy Information Administration, International Energy Statistics database, accessed February 11, 2022. Eric Han, "Offshore discoveries in the Mediterranean could increase Egypt's natural gas production," Today in Energy, U.S. Energy Information Administration, August 14, 2018. "Egypt officially became a net exporter of LNG, bringing our gas hub ambitions ever closer," Enterprise, February 16, 2020. Ahmed Fouad, "Egypt's future in the LNG market," Middle East Institute, September 21, 2021.
32. BP 2021 Statistical Review of World Energy, accessed January 27, 2022.
33. Egypt Power Report: Q4 2021, Fitch Solutions Country Risk & Industry Research, August 2021. "Affiliated Companies," Ministry of Electricity and Renewable Energy government website, accessed January 31, 2022. International Renewable Energy Agency, Renewable Energy Outlook: Egypt, October 2018.
34. Mariam Fahmy and Nada Hussein, "Electricity Regulation in Egypt," Thomson Reuters Practical Law, November 1, 2020, accessed February 2, 2022.
35. International Trade Administration, "Egypt Country Commercial Guide: Renewable Energy," September 15, 2020, accessed February 2, 2022. "El-Molla: Egypt to Stay Focused on Gas Despite Transition," Energy Intelligence Group, November 24, 2021.
36. U.S. Energy Information Administration, International Energy Statistics database, accessed January 27, 2022.
37. International Renewable Energy Agency, Renewable Energy Outlook: Egypt, October 2018. "Egypt Power Report: Q1 2022," Fitch Solutions Country Risk & Industry Research, November 2021. "Electricity," Arab Fund for Economic & Social Development, accessed February 1, 2022. "Electricity Interconnection Projects," National Electrical Power Company (Jordan), accessed February 1, 2022.
38. "Saudi-Egypt interconnection awards confirmed," Power Technology, October 15, 2021. "Egypt, Saudi Arabia sign contracts for \$1.8B electrical interconnection project," Egypt Today, October 5, 2021. "Egypt and Jordan to double capacity of interconnection," Energy & Utilities, November 29, 2021.
39. Mohamed Sabry, "Egypt to overhaul hydropower plants amid Nile dam crisis," Al-Monitor, September 22, 2021. "Aswan High Dam, River Nile, Sudan, Egypt," Water Technology, accessed February 3, 2022.
40. Sonal Patel, "Ethiopian GERD Mega-Dam Ready to Test Power Production," Power Magazine, January 6, 2022. "Grand Ethiopian Renaissance Dam Project, Benishangul-Gumuz," Water Technology, accessed February 3, 2022. "Ethiopia's massive Nile dam explained," Al-Jazeera, July 8, 2021. John Mukum Mbaku, "The controversy over the Grand Ethiopian Renaissance Dam," The Brookings Institution, Africa in Focus, August 5, 2020.
41. U.S. International Trade Administration, "Egypt Country Commercial Guide: Electricity and Renewable Energy," September 5, 2021, accessed February 2, 2022. "Egypt Power Report, Q1 2022," Fitch Solutions Country Risk & Industry Research, November 2021. "Gulf of Suez 1 wind farm project timeline and latest news," Construction Review Online, January 20, 2022, accessed February 2, 2022.
42. International Trade Administration, "Egypt Country Commercial Guide: Electricity and Renewable Energy," September 5, 2021, accessed February 2, 2022. Andrew Raven, "A New Solar Park Shines a Light on Egypt's Energy Potential," International Finance Corporation, October 2017. "Benban Solar Park," NS Energy Business, accessed February 3, 2022. Al-Masry Al-Youm, "Ten facts on Egypt's Benban Solar Park, the largest solar power plant in the world," Egypt Independent, December 27, 2021.
43. World Nuclear Association, "Nuclear Power in Egypt," World Nuclear Association Country Profiles, updated January 2022, accessed on February 1, 2022.
44. World Nuclear Association, "Nuclear Power in Egypt," World Nuclear Association Country Profiles, updated January 2022, accessed on February 1, 2022.

Since 2003, Flow Measurement Systems Company has been established according to the investment authority laws and executive regulations to serve the oil & gas sectors as well as industrial & commercial sector in Egypt & the region to provide hydro test and calibration services.

We are accredited by the ILAC, based on the international mutual recognition arrangements (MRA) under the guidelines of ISO/IEC 17025 for general requirements for competence of calibration and testing laboratories. We are certified { API Q2 , ISO 14001 , ISO 45001 , ISO 9001 } The ILAC is the peak international authority on laboratory accreditation. Laboratory accreditation provides our clients with formal recognition of the competence of our laboratory. We are re-evaluated regularly by the accreditation body to ensure our continued compliance with requirements. Thus, being accredited is highly regarded both nationally and internationally as reliable indication of our technical competence.

Accordingly our data is readily accepted overseas Throw Scope of :
 Drilling rig inspection services and acceptance surveys (including Category III & IV); Inspection, repair, service, maintenance and re-certificate of drilling equipment, well servicing equipment and well control system equipment; Control Systems for Drilling Well Control Equipment and Control Systems for Diverter Equipment.



CALIBRATION SERVICES

- Calibration for pressure devices up to 30K psi (Analog & Digital).
- Calibration for pressure recorder (Renting and repair).
- Calibration for tong torque and tong line pull systems.
- Calibration for silo tanks weight indicator systems.
- Length measurement tools (vernier caliper- micrometers).
- Calibration for torque devices with different kind and ranges.
- Calibration for all kind of pressure and temperature transmitters and transducers.



Rig inspection and cat III & IV services

Drilling rig inspection services and acceptance surveys (including Category III & IV); Inspection, repair, service, maintenance and re-certificate of drilling equipment, well servicing equipment and well control system equipment; Control Systems for Drilling Well Control Equipment and Control Systems for Diverter Equipment .



PIPELINE SERVICES

Equally applicable to new build modules as well as existing plant , good flange management can provide a single point source of all information relating to the history, make up or any other relevant details relating to all flanges within a system.

Applications:

- Used during engineering construction, commissioning and shutdowns
- Flange break register during shutdown and maintenance



PRESSURE TEST ACTIVITY (Hydrostatic & Pneumatic)

- Fully computerized and plc controlled test units, capable of building pressure up to 30,000 psi
- The pressure test monitored digitally on system wide screen and recorded on digital charts to issue full test report.
- Camera system is installed for monitoring the test and observing any leakage.
- Internal video borescope for inspection internal parts.
- Wide range of items tested by FMS (Manual Valves, Pipelines, blow out preventers, vessels, etc)



PRESSURE SAFETY VALVE TESTING

We undertakes Inspection, Overhaul, Testing and Certification of all types of Pressure Relief Valves , pressure switches, pilot relief valves) with high accuracy equipment like Ventil test unit , Haskel gas boosters , pressure sensors) FMS carries out these jobs according to procedures developed 'In House' conforming to the requirements of BS EN ISO : 2013, 4126 API-527, API-598 and API 576 standards.



AIR BLOWING

Objective:

Air blowing services as an efficient way to remove construction debris, loose rust, liquids, and other contaminants from process piping.

Application processes:

- Air Flushing for piping diameters less than 6".
- Air Blowing (Buffing) for piping diameters bigger than 6".



FMS INTEGRATED CONTROL

- Everything you need for your Automation and Control Systems
- Control Panel Design & Fabrication.
- Programmable Logic Controllers (PLC).
- OIT's (Operator Interface Panels) or HMI's (Human Machine Interface).
- PONDHOP automation and control systems.
- Process Plant Troubleshooting & Engineering Problem Solving.

Contact Persons:

■ **Khaled abdeltawab**
 General Manager
 012 2364 0198
 K.tawab@fms.com.eg
 admin@fmseg.com

■ **Mahmoud Rashwan**
 Technical Manager
 0121 112 2491
 qhse@fmseg.com

■ **Mostafa Ahmed**
 lab & workshop specialist
 0121 112 2495
 ls@fmseg.com

■ **Sayed Ahmed**
 Financial Accountant
 0121 112 2494
 f1@fmseg.com

■ **Anwar Ashraf**
 Business & Development
 0127 377 3385
 bd@fmseg.com

■ **Wael Osama**
 Senior Accountant
 0128 278 3496
 0100 117 2849
 frm@fmseg.com





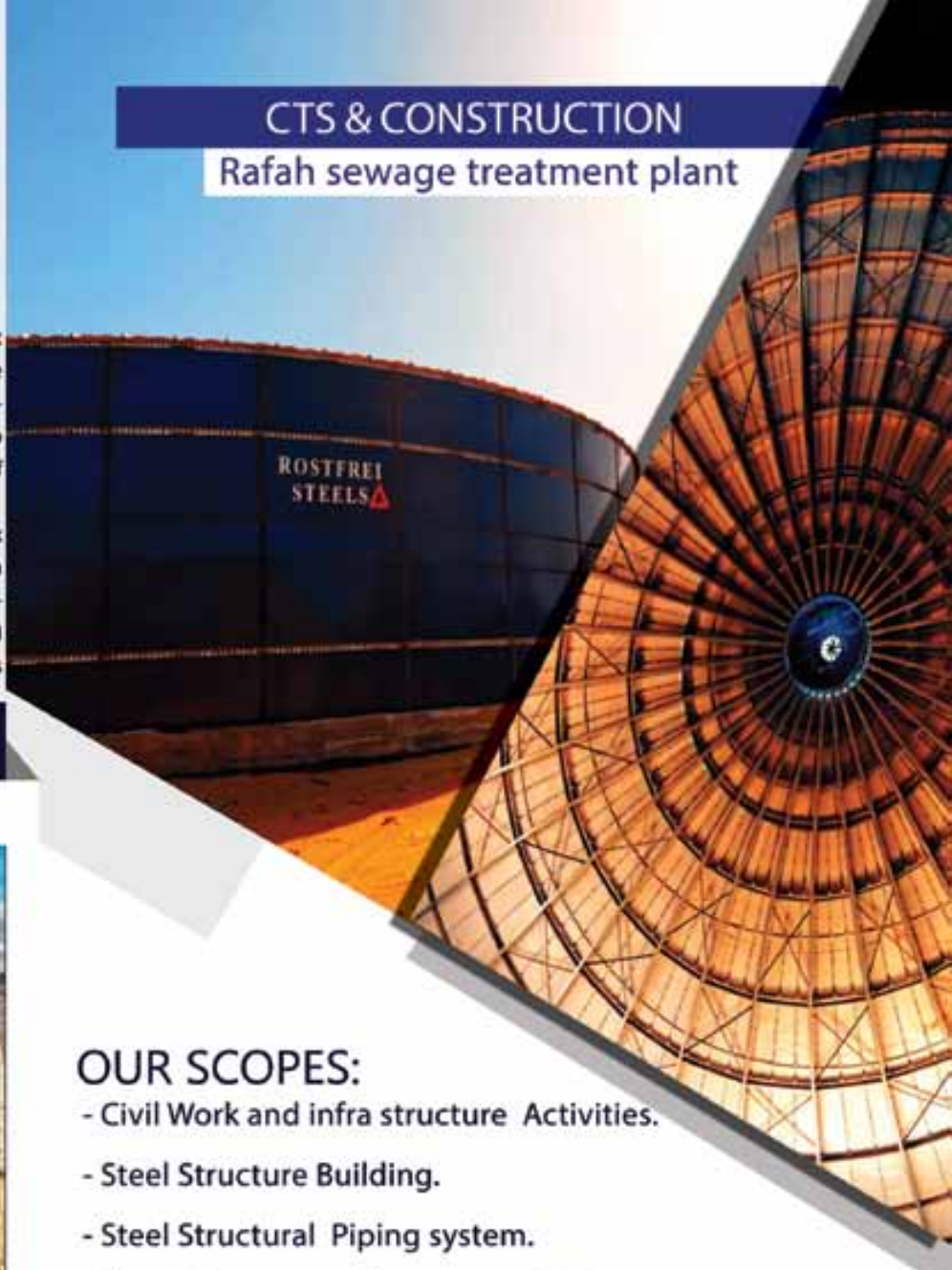
CTS & Construction

ABOUT US:

CTS Egypt JV Hadeed ALKhaleej was established at 2008 in UAE and at 2017 in Egypt to become the world's leading integrator of Steel Structure Building, life safety solutions, Floating Roof, Glass Fused to steel Bolted Tanks and to be the sole distributor of Steel buildings and steel Tanks

Moreover we started our integrated civil & Steel work activities in Egypt, we worked with DPW-Sohna, Orascom, Madkour, Ceramic Cleopatra, China Harbour -CHEC, Concord, Argynza, Cairomatic, ASCOM and other international companies and facilities

CTS & CONSTRUCTION Rafah sewage treatment plant



DPW Marine Bollard



Vertical Mill and Crusher



OUR SCOPES:

- Civil Work and infra structure Activities.
- Steel Structure Building.
- Steel Structural Piping system.
- Skin & Pontoon roofs.
- Aluminum geodesic domes.
- Glass Fused to Steel Tanks From 100 m³ :20,000 m³ (GLS/GFS Tank)
- We supply Grain storage systems which consist of Grain Storage Silos, Handling Equipment, Monitoring Systems, Aeration Systems, and Automation Systems, All types of seeds and grains can be stored We fabricate Silos in the Rostfrei steel facility in New Delhi from Alu Zn /GI Sheets.
- Fire-Water Tank /Biogas Tank.
- Fire Fighting Equipment.



+2011232611698

INFO@CTSEGYPT.ORG

21/B3 ElMansour St, El-Laselky Zone El Maadi El-gedida

Need a Lift? A Rotary Gear Pump, an ESP System Without the ESP Pump

By: Ryan Chachula, Advancing Pump Technology Corp; Dale Serafinchan, DASCO ESP INC; Jerry Dietz, Encana USA

Abstract
Electric submersible pump (ESP) systems have over many decades proven themselves as a reliable Industry leading lift system. However, there are limitations to the ESP lift system particularly with reliability and performance in high volume deep unconventional wells with steep decline curves and high amounts of free gas which present multiple challenges that require reliable solutions to enhance the performance and run life of the ESP system and increase overall production. This paper presents the «new innovative next thing» in artificial lift. A robust high volume, low speed positive displacement rotary gear pump (RGP) that has the ability to operate reliably throughout ranges untouched with centrifugal pumps, delivers optimal production and does so in a cost-effective manner in comparison to a conventional ESP system.

The main challenge for long economical production is high decline rate – typically production rates drop 50 - 80% of initial rates after the first year. The primary reasons for such reservoir behavior: transient inflow effect, no pressure maintained and fracture deterioration. Producing a wide and flexible range of production rates with high efficiency is a significant challenge to artificial lift selection.

With the Industry trending to reduce costs by drilling reduced ID horizontal wellbores with long lateral lengths, this poses a challenge particularly in integrating a life-time one artificial lift system design to capture both the high and low ends of the decline curves that can be handled by ESP systems particularly in confined wellbore architectures. This coupled with operational issues such as pump cavitation or gas locking, high motor operating temperatures, and abrasion/erosional issues due to excessive gas slugging and solids production led to the development of an innovative positive displacement pump.

This paper describes the steps undertaken in designing, testing, and planning a pilot for a prototype rotary gear pump which replaces the centrifugal pump component of an ESP

system while addressing all of the functional requirements for successful field implementation.

Introduction

Unconventional horizontal shale plays are emerging and undergoing rapid development at an unprecedented rate across North America. Recent advances in multi-stage fracture stimulations and extended horizontal well lengths have dramatically increased well productivity, in most instances without increasing the ID of the production casing to compensate for the high volumes of liquids & gas production.

Consequently, these advances have typically led to earlier-than-anticipated ESP failures, reduced MTTF's and pro-active well interventions due to rapid declines in which liquid rates quickly reside outside the pump design operating window. The challenge has been in the design of an appropriate high-volume ESP lift system with a large operating range; addressing unknown fluid inflows, fluid transmissibility and recharge and capable of producing and achieving liquid volumes of up to 6000+ bbls/day and 2 - 3 MMscf/day of gas.

The need to develop an integrated fit-for-purpose alternate high-volume lift system with a robust high to low operating range that would serve as a single one artificial lift design for the entire well life quickly became apparent (Figure 1). The main criterion for an innovative lift solution is a generation of maximization of value with minimal risks over well-life within given production constraints.

Challenges

Multiple challenges were identified when first attempting to design a positive displacement lift system that would address the reservoir fluid rheology properties of long extended horizontal unconventional oil and gas shale wells. Production after completion and fracturing has been seen to drop by over 50 to 75% within the first year with initial production rates of four to five thousand barrels per day

rapidly declining and leveling to a few hundred barrels a day. Designing for optimal multiphase flow with wellbore depths reaching 10,000 ft and temperatures of up to 300°F is a complicated and challenging problem for artificial lift planning. The authors quickly recognized early in the conceptual design process that the following challenges or functional requirements need to be overcome for a fit-for-purpose RGP system in order to achieve sustained effective lifting of the shale reservoir fluids.

1. Wide operating ranges and pressure capabilities
 - a. 100 to 5,000 bbl/d or greater
 - b. 0 – 4,500 psi pressure discharge or greater
 - c. Ability to achieve +/- 95% drawdown (i.e. $P_{wf} = 150$ to 300 psi)
 - d. Pump efficiencies > 80%
2. Slimhole design capable of being run within a limited ID shale wellbore architecture
 - a. 5.5 - in, 20 ppf case (Drift ID = 4.65 in), pump OD of 4.00"
 - b. 4.5 - in, 11.6 ppf case (Drift ID = 3.87 in), pump OD of 3.38"
3. Effective gas handling and pump recovery when high rates of gas are ingested into the pump intake.
 - a. Pumps require the ability to ingest gas rates >50% GVF for wellbores producing rates of 75% free gas or higher.
 - b. The pump must have the ability to ride through gas slugs and recover by continuing to produce the gas until fluid is returned to the pump intake.
 - c. Ability to operate under «dry liquid free conditions» without damage to the pump.
4. The ability to ingest and effectively handle abrasive material (up to 3% sand) without excessive wear
5. The pump must bolt directly onto all ESP vendors existing equipment (diameter & bolt patterns)
6. Downhole temperature and pressure monitoring with continuous surface readout, fully interchangeable and adaptable with current pressure measurement sensors
7. Remote monitoring and optimization capability

Functional Design Specifications

To overcome deep Hz high volume lift constraints, the fit-for-purpose RGP must cover a wide range of liquid rates conditional to the high IPR curves, while incorporating the following functional requirements as shown in Table 1:

RGP Theory of Operation

The basic design of the RGP has been around for a long time and has been applied specifically for surface applications of pumping high viscosity fluids. Gear pumps are positive

displacement and use the meshing of gears to pump fluid by displacement. As the rotor gear begins to turn, the idler gear rotates with the teeth beginning to mesh accordingly. With the rotation of the gears they separate on the intake side of the pump, creating a void and suction (low pressure area) which is filled by formation fluid. The fluid is carried by the gears to the discharge side of the pump (Figure 2), where meshing of the gears displaces the fluid. The mechanical clearances are small – the tolerances are specifically machined to be made precise and efficient.

The tight clearances, along with the speed of rotation, effectively prevent the fluid from leaking backwards.

Although the pump does handle solids and abrasive material well (refer to flow loop testing results), the tolerance between the gear and cylinder wall prevents fluid slippage. The pump can handle shear sensitive fluids with a gentle non-pulsating flow. The flow is directly proportional to the speed, independent of the pressure, thus giving greater control and reliability to the Operator.

Advantages over a Centrifugal Pump

The two most common ESP pump designs in the unconventional Oil Industry are the radial & mixed flow pumps assembled in either compression or floater configurations. Both pump stage geometries are designed to address specific fluid flow and GVF operating conditions; however, the unique production challenges of unconventional reservoirs have posed limitations resulting in numerous shut downs due to gas slugging, abrasion and erosion due to the requirement of high RPM operations. This resulted in premature failures which have a negative effect on the production and the longevity of the lift system. The rotary gear concept differs from the more common ESP used for artificial lift. Listed below are the advantages of the gear pump over the electric submersible centrifugal pump:

- Flow is directly related to speed at 1:1. If you double the speed, you double the output (Figure 3).
- There is no down thrust or up thrust created. With an ESP, there are axial or down thrust loads transferred to the shaft as you move on the pump curve (Figure 4).
- Pump landing depth and flow line pressure have very little effect on production rates. The output of a gear pump is independent of discharge pressure minus the slippage losses at higher differential pressures.
- Reduced speed, reduced erosion, reduced abrasion, same production. Since a gear pump doesn't have to generate centrifugal force, it can be operated at a much lower speed. This makes it smoother and more controllable.
- A gear pump performance only improves when viscosity

increases as compared to fluids that are too viscous for a centrifugal pump. Due to the internal clearances, high viscosities are handled easily and flow rate increases with increasing viscosities.

- Gear pumps are self-priming which can be a huge benefit.
- The discharge pressure can be very high. Pressures of 4,000 psi are attainable from a single stage.
- Gear pumps don't have a BEP, they are consistently efficient (Figure 5).
- Short pump lengths and equal production rates allow for optimized landing depths and location in high DLS wells. The high output gear stages results in a short compact design, ~ 110/th to 120/th the length of an ESP pump.
- Low internal velocity implies little shear is applied to the pumped fluids, ideal for foamy reservoir fluids.
- Gear pumps are significantly less susceptible to cavitation due to the lower speed requirements and the fact that cavitation voids are transferred from the inlet to the discharge side of the pump. The effect is reduced efficiency, but the pump continues to produce, cavitation or gas locking is absent regardless of the GVF%.
- Cavitation is the formation of vapour cavities in a liquid, small liquid-free zones («bubbles» or «voids») that are the consequence of forces acting upon the liquid. It usually occurs when a liquid is subjected to rapid changes of pressure that cause the formation of cavities in the liquid where the pressure is relatively low. When subjected to higher pressure, the voids implode and can generate an intense shock wave.

Flow Loop Pilot Test Results

Prior to full-field artificial lift system implementation, flow loop testing is required to vet the conceptual design and ensure all identified functional requirements and deliverables are met. As with generating centrifugal pump curves, for consistency purposes, it was decided to conduct all initial tests at standard conditions utilizing fresh water (SG = 1.0) at room temperature (16°C). To attain the high discharge pressures and calculated volumetric output of the gear sets, a HPS testing apparatus unit was installed and modified with 5000 psi pressure piping, a 150 HP electric motor that provided mechanical power to the pump, a variable frequency drive, turbine flow meters, a choke valve, and programmable logic controller (PLC) driven automation. API standards were strictly followed concerning flow, pressure, and torque measurements. Finally, identified safety issues were mitigated, either by design or administrative methods to help minimize their severity (Figure 6 illustrates a 2D view of the modular arrangement of the entire pump flow loop test bench). Testing focus areas included:

- Pressure vs Flow
- Vibration vs Speed
- Lubrication and re-circulation
- Gas effects on volume and torque
- Torque during start-up at low & high pressure
- Reverse operation
- Solids handling

Power Water System

As with the Industry practice in generating pump performance curves with centrifugal ESP pumps, API RP 11S2 (Recommended Practice for Electric Submersible Pump Testing) guidelines were strictly followed to establish pump product consistency. Consequently, the published RGP performance curves generated and reported are based on utilizing fresh water at 60°F (S.G. – 1.0) throughout the flow loop testing sequences.

Optimum Operating Range, Speed Variations and Applied Backpressure The RGP is a positive displacement pump for which production is a direct function of speed. The testing range parameters were set from 03000- RPM pump speed, fluid discharge rates of 0 - 4000 bbls/d, GVF's from 10 - 50 % and the production of suspended solids from 03%- by volume. The Optimum Operating Range for the RGP has been recommended from 1000 – 3000 RPM which corresponds to 17 – 52 Hz motor speed for the following reasons: (refer to Figure 7).

- Rotary Gear Pumps don't need speed to create pressure
- Slower operation reduces erosion rates due to fluid velocity
- ESP motors on cables do not operate efficiently below 20 Hz

Flow loop testing undertaken was staged in 50 RPM increments over a range from 1000 to 3000 RPM to determine the efficiency of the gear pump at various increasing speeds. Figure 8 illustrates the results of a single stage pump displacement and efficiency at various RPM's (no applied backpressure) in which pump efficiencies averaging > 90% were achieved at 1400 to 3000 RPM. Applied backpressures of 0 – 3300 psi (7650 ft of equivalent water head) were also conducted which concluded that a sustained TDH of 7650 feet is achievable with a single rotary gear pump stage (refer to Figure 9). These results suggest that pump landing depths of 10,000 feet are attainable considering their application in lower density gassy reservoir fluid gradients.

Gas Volume Fractions

Gas Volume Fractions (GVF) are defined as the ratio of the gas volumetric flow rate to the total volumetric fluid flow rate of all fluids at flow conditions (pump suction pressure

and temperature vol/vol). Centrifugal pumps are mainly designed to handle liquids and require the liquid transfer from one stage to the next to create pressure increases. Due to this design, centrifugal pumps are solely dependent on the ability of the first stage to remain full of fluid and feed the subsequent stages. Centrifugal stages will suffer from head degeneration and gas locking in the presence of gas. Gas in an ESP will cause the pump to shut down frequently due to loss of flow, this cycling and loss or reduced flow creates heat due to lack of flow while increasing stresses on the mechanical component of the ESP due to accelerations reducing the life of the ESP.

To address the high GVF's, ESP companies have designed gas handling and gas avoidance devices which are installed below the main production pump and serve the purpose of either separating the gas out from the fluid or compressing the gas back into solution.

Table 2 outlines the maximum allowable limits of free gas at the various inlets of ESP stages.

The Rotary Gear Pump was a specifically designed technology adaptable to any ESP vendor's equipment.

By design, the RGP will easily couple to ESP gas separating or gas handling equipment when required.

To quantify this, flow loop testing was conducted with GVF's ranging from 10 – 50%. The objective of this test was to determine whether the RGP stages could effectively operate with high percentages of free gas, perform at these conditions, recover and return to design liquid flow rates. In addition, the testing was designed to better understand what the effect was on pump efficiencies. These results would dictate if and at what GVF percentage there would be a need for any separation devices and the subsequent higher HP longer ESP's to drive them. The key benefit is that eliminating the gas separation or gas handling equipment, will result in a reduction in capital cost of a pump assembly and subsequently reduces the overall length of the production string.

Sand Slurry Testing

As sand slurry testing is still ongoing with termination of the tests anticipated by mid-March, final results of the tests are not published. Downhole pumps are required to produce abrasive materials of various sizes while maintaining long term efficiency. For this reason, testing of the RGP was undertaken with abrasive material to understand how each component of the RGP performs against erosion and abrasion. Testing consists of a sand slurry mixture with 16°C water and silica based abrasives sized at 350-micron, 46 grit (0.014").

Field Trial – Candidate Selection Process

Encana chose their Permian Basin (Midland and Martin county) operations for piloting the RGP. Sufficient Permian

production experience and historical well failures have been collected over the years in which general trends and data sets have been documented for comparative analysis for piloting new technologies.

The common practice for Encana is to initially install ESP's on new horizontal wells until the well declines to approximately 800 to 500 bbls/day total fluid, at which time the well is converted over to rod pumping or other forms of artificial lift. The lift conversion transition over to conventional pump and rods or other lift forms have been problematic and repeatedly posed operational issues due to the high GLR's resulting in gas locking, low pump efficiencies or reduced pressure drawdown which ultimately impacts the ability to effectively pump off the wells. Slug flows bring solids issues and pump gas interference which increases operating expenses from poor runtime, excessive workover costs, and inadequate pressure drawdown. The Encana Permian team narrowed their pilot candidate selection process down to two scenarios; (1) replace an existing failed ESP with the RGP lift system and land the pump intake deeper in the wellbore within the build section to capture oil upside due to producing at a lower Pwf on the IPR curve, or (2) during the transition period of converting an ESP lift to rod pump or other form of artificial lift, install a RGP in order to reduce historically high workover frequency, drawdown and gas locking issues. A decision was made to proceed with option (2) as both pre and post installation data could easily be collected and compared to evaluate the RGP technology in optimizing artificial lift performance in horizontal wells. Figure 10 is a typical graphical representation of a Permian analogue well which illustrates the transition period.

Well Test Objective and Goals

The Rotary Gear Pump design chosen for the candidate pilot well test was based directly on the Encana Permian Engineering team's outlined test objectives and end goals. A group decision was made to replace an existing mid-life ESP well while utilizing the existing surface drive and subsurface ESP lift equipment minus the centrifugal pump. A scheduled well intervention would basically entail pulling the existing ESP lift string, replacing the centrifugal pump with a rotary gear pump and re-running the string to the previously landing depth. The surface VFD and electricals would be utilized to drive the downhole RGP. Following is a list of the test objectives and subsequent deliverables:

- Determine if a smooth transition from ESP to RGP can be effectively achieved at an initial production rate of 500 - 800 bbls/day.
- Ability to effectively handle high GLR's.
- Effectively draw the well down to an intake pressure of

100 - 200 psi.

- Determine if a RGP can be utilized as a «one-lift» system on future new wells.
- The ability to overcome gas locking, cavitation, lack of drawdown and motor failures as experienced with ESP systems.
- Measure and determine the differential power consumption savings on a per barrel basis.
- Capital cost and operating cost savings per well due to extending the MTTF of the novel lift system.

Candidate Well Data & Reservoir Fluid Properties

Due to the high operating GLR's (1500 – 2500 scf/bbl) conditions, the focal area for candidate well selection was determined in either the Martin or Midland counties of the Permian basin. The horizontal wells within these counties produce either from the Upper, Middle, and Lower Sprayberry as well as the Wolfcamp A and B zones respectively (refer to Figure 11). The target test interval was finalized on a pad well completed in the «Lower Sprayberry» as production from this zone has been the most troublesome. ESP's are typically landed at the KOP which is around 8800 ft TVD/MD. Reservoir temperature is approximately 165°F, and the initial reservoir pressure at the pump intake is 3800 psi.

Field Trial Plans

The Multi-stage RGP production string designed (Figure 12) for the Permian mid-life well is scheduled for a tentative mid-April 2019 scheduled installation date.

Conclusions and Future Work

1. Results from the flow loop testing suggests the positive displacement Rotary Gear Pump is a viable artificial lift system that has the ability to operate throughout ranges where centrifugal pumps are known to struggle. Preliminary designs and pre-installation testing suggest that a one lift system is potentially attainable with this technology.
2. Sustained deployed field trial(s) and test results are required to prove up the outlined list of test objectives and end goals. The success of these results will demonstrate that a controlled risk approach, through phased development, can be used effectively in proving new variant technologies on operating fields.
3. The RGP is an adaptable technology to various drive systems currently operating in the Industry market which will reduce capital expenditures when converting ESP to RGP.
4. Reduced pump efficiencies were observed during increased applied backpressures which is a direct function

of recirculation in the lubricating system within the pump and slippage past the gearset. These fluid losses account for <5% flow and can be simply compensated by increasing pump speed (RPM).

Acknowledgements

The Authors wish to thank the management of Encana Corporation, Advancing Pump Technology Corporation and DASCO ESP Inc. for their permission to allow the details of this project to be published.

The authors also thank the Encana Denver and Permian Engineering support staff, without whose efforts the project could not have succeeded.

Nomenclature

- °C :Degrees Celsius (temperature unit)
- °F : Degrees Fahrenheit (temperature unit)
- API : American Petroleum Institute Gravity (Inverse measure of relative density unit)
- BEP : Best Efficiency Point
- ESP : Electric Submersible Pump
- GLR : Gas Liquid Ratio: defined as the ratio of produced gas to produced liquids (oil + water)
- GOR : Gas Oil Ratio: defined as the gas rate divided by the oil rate (scf/bbl or m³/m³)
- HPS : Horizontal Pumping System
- ID : Inside Diameter (measured in inches or millimeters)
- IPR : Inflow Performance Relationship
- KOP : Kick Off Point
- MMscf/d : Gas rate: defined as Million cubic feet per day
- MTTF : Mean Time To Failure
- OD : Outside Diameter (measured in inches or millimeters)
- Psi : Pounds per square inch (pressure unit)
- Pwf : Pump Intake pressure (measured in psi or kPa)
- RGP : Rotary Gear Pump
- RPM : Pump speed: defined as revolutions per minute
- TSTM : Too Small To Measure

REFERENCES

- Khan, N. and Ganzer, L. 2014. An Integrated Life-Time Artificial Lift Selection Approach for Tight/Shale Oil Production. SPE Hydrocarbon Economics and Evaluation Symposium, Houston, Texas, USA, 19-20 May, SPE 169833.
- Bhuiyan, A., Reed, S., Nemeč, B., Henson, D. 2015, An Improved Electrical Submersible Pump Performance Testing System, SPE Artificial Lift Conference – Latin America and Caribbean, Salvador, Bahia, Brazil, 27-28 May 2015, SPE-173923-MS.
- Humphreys, C.R., Vangolen, B.N., Allison, A.P., Yin, D., Yicon, C. 2018, Evaluating Tailpipe Systems Designed to Optimize Artificial Lift Performance in Horizontal Wells, Houston, Texas, USA, 28-30 August 2018, SPE-190938-MS.
- API RP 11S2, Electric Submersible Pump Testing. 20134, Washington, DC: API

MISC

Industrial Automation Systems



ABOUT US:

MISC is an Egyptian company established in 1999 and has been ever since providing industrial automation solutions to the Egyptian market and also with references in Syria, Nigeria and UAE.

MISC is a certified Siemens solution partner for both factory and process automation. MISC has also expanded its partnerships to become a system integrator for Rockwell and Honeywell. We have long reference list in oil and gas industry and have conducted projects and services for companies.



Distribution & Agency Engineering Services Siemens Spare Parts

+202 22680994
+202 22680997

info@miscgypt.com
admin@miscgypt.com

6 Sayed Zakaria Khalil st.,
Masakin Sheraton Heliopolis,
11361, Cairo, Egypt.



Reliable Protection of Outdoor Plant and System Technology

Since 1965, INTERTEC has supplied countless fit-for-purpose GRP enclosures, cabinets and shelters to protect integrated equipment of customers in the energy, chemical and engineering industries worldwide.

Expert engineering, high-tech materials and precisely coordinated HVAC technology make it possible for our solutions to safeguard your equipment even under extreme operating conditions.

Protective Solutions for Field Instruments • Analyzers • Radar Equipment • Signaling Systems • Transmitters • Process Analysis & Control Equipment • Safety Technology • Off-Grid Applications • Battery & Power Equipment • Temperature Sensitive Applications • Hazardous & Extreme Environments



www.intertec.info



INTERTEC Middle East LLC
2121 Parklane Tower,
Business Bay
Dubai, United Arab Emirates
Phone: +971 4580 4564
E-mail: UAE@intertec.info



In the oil and gas industry, the flow of liquids and gases must be measured during every phase of exploration, production and transportation. These applications demand the highest oil and gas meter accuracy and reliability, as well as long-term stability and a low cost-of-ownership. Badger Meter offers one of the broadest product portfolios for use in upstream operations that span offshore to onshore activities, including well testing, enhanced oil recovery, fractionation, completion and separation to recover and prepare crude oil and natural gas.



Blancett®

Blancett® Turbine flow meters measure everything from water in hydraulic fracturing and mining operations to gases and liquids from wellheads, plus various fluids in sanitary environments. These turbine meters deliver accurate, consistent and informative flow measurements of liquid and gas, including in upstream oil and gas, petrochemical and irrigation applications.

LM OG I PVC

Precision oval gear meter series LM OG I PVC, for industrial applications
The LM OG-I oval gear meters of the IOG series are coated meters and have been designed to measure flows up to 115 lpm. They can dispense fuels, hydrocarbons, water based fluids, motor oils, gear oils, coolants and other similar liquids, as well as special and aggressive fluids.



THIS IS
OUR PRODUCT RANGE,
**TO BE MORE
PRECISE.**



TERRANOVA®

WE DO PROCESS INSTRUMENTATION PRECISELY



HQ: Via Rosso Medardo, 16 - 20159 Milano IT

Factory: Via A. Gramsci, 1 - 26827 Terranova dei Passerini (LO) - IT

ph: +39 0377 911066 · fax: +39 0377 919156

in terranovainstruments

@ terranovainstruments

www.terranova-instruments.com

Eternity
TECHNOLOGIES

POWER FOR TOMORROW TODAY

A global leader in the industrial battery market providing world-class products to **Motive Power** and **Reserve Power** applications.

Delivering the most **reliable, sustainable & available** battery solutions to the market

With a unique global & regional manufacturing operation allowing the **best flexibility & delivery leadtime** in the industry.



Largest OPzV & OPzS range in the market

www.eternitytechnologies.com



Infinitem Solar Hybrid Energy Solutions

The infinitem modular hybrid solution combines solar and any other energy source (i.e. diesel generator, fuel cell, wind turbine, etc.) along with energy storage batteries.

- A perfect solution to scale as your need for energy increases.
- Start reducing your CO2 footprint, phase out your diesel consumption and work from a hybrid to a full solar solution.

www.tss4u.com

Table 1—Functional Specifications of RGP

| | |
|-----------------------|---------------------|
| Operating Range | 100 - 5,000 bbl/d |
| Operating Speed | 0-3500 RPM |
| Gas Production | +/- 75% FG |
| Pump Discharge | 4,500 psi |
| Motor Driver | 2 pole, 4 pole, PMM |
| Pump Efficiency | >80% |
| Operating Temperature | 300°F |
| Crude Range | 12 - 50+ API |
| Sand Production | 0 - 3% |
| Pump Housing OD | 4.00 in |

Table 2

| ESP Stage Type | Free Gas at Inlet (%) | HP Required |
|--|-----------------------|-------------|
| Radial Stage | Up to 10% | 0 |
| Mixed Flow Stage | Up to 20% | 0 |
| Gas Handling Device (Pump style) | Up to 45% | 0 - 45 |
| Muti-Phase Gas Handling Device (Auger style) | Up to 75% | 0 - 75 |

Table 3—Results of GVF Testing

| SPEED (RPM) | INCREASING INGESTED GVF'S (%) | | | | | | | | | | | | | | | LIQUID FLOW RATE (B/D) | | | | | | | | | |
|-------------|-------------------------------|------|------|---|--|--|--|--|--|--|--|--|--|--|--|------------------------|------|------|------|------|------|------|------|------|------|
| | 1400 | 9.5 | 19.0 | Still Producing Liquid but out of the Effective Range of the Flow Meter Equipment | | | | | | | | | | | | | 190 | | | | | | | | |
| 1500 | 14.3 | 28.6 | 127 | | | | | | | | | | | | | | | | | | | | | | |
| 1750 | 9.1 | 18.2 | 27.3 | | | | | | | | | | | | | | 200 | | | | | | | | |
| 1925 | 5.7 | 11.4 | 17.1 | | | | | | | | | | | | | | 28.6 | 317 | | | | | | | |
| 2100 | 6.0 | 12.1 | 18.2 | | | | | | | | | | | | | | 24.2 | 30.3 | 36.4 | 300 | | | | | |
| 2350 | 4.3 | 8.5 | 12.8 | | | | | | | | | | | | | | 17.0 | 21.3 | 25.5 | 29.8 | 425 | | | | |
| 2450 | 4.0 | 8.0 | 12.0 | | | | | | | | | | | | | | 16.0 | 20.0 | 24.0 | 28.0 | 32.0 | 452 | | | |
| 2575 | 3.8 | 7.5 | 11.3 | | | | | | | | | | | | | | 15.1 | 18.9 | 22.6 | 26.4 | 30.2 | 34.0 | 480 | | |
| 2800 | 3.5 | 7.0 | 10.5 | | | | | | | | | | | | | | 14.0 | 17.5 | 21.0 | 24.6 | 28.1 | 31.6 | 35.1 | 38.6 | 516 |
| 3025 | 3.3 | 6.6 | 9.8 | | | | | | | | | | | | | | 13.1 | 16.4 | 19.7 | 23.0 | 26.2 | 29.5 | 32.9 | 36.1 | 39.3 |

Table 4—Summary of Flow Loop Testing

| Testing Parameter | Results/Comments |
|---|---|
| Water Only Test (single stage) | 1200-3000 RPM range, up to 832 bbl/d |
| Discharge Pressure | 0 - 3300 psi |
| Pump Efficiency Range (No back pressure) | 85 - 96% |
| Pump Efficiency Range (Backpressure 250 - 3300 psi) | 85 - 47% (slippage) |
| Testing Operating Range | 1200 - 3000 RPM |
| GVF Range | Up to 50% (without the use of separation or gas handling equipment) |

Table 5—Reservoir / Well Data

| | |
|-----------------------------------|--------------------|
| Producing Formation | Sprayberry |
| ESP Landing Depth – TVD | Avg ~ 8,800 ft |
| Horizontal Lateral Depth - MD | Avg ~ 17,150 ft |
| Production Casing Size | 5-½" OD, 17-20 ppf |
| Total Fluid Rate | ~ 500-800 bbl/d |
| Water Cut | 70% |
| GLR | 1600-1700 scf/bbl |
| Gas Rate | 820 Mcf |
| Oil API | 45° |
| Initial Reservoir Pressure | 3800 psi |
| ESP Intake Pressure | 775 psi |
| CO ₂ /H ₂ S | 0.3% / 0% |
| Sand Production | TSTM |

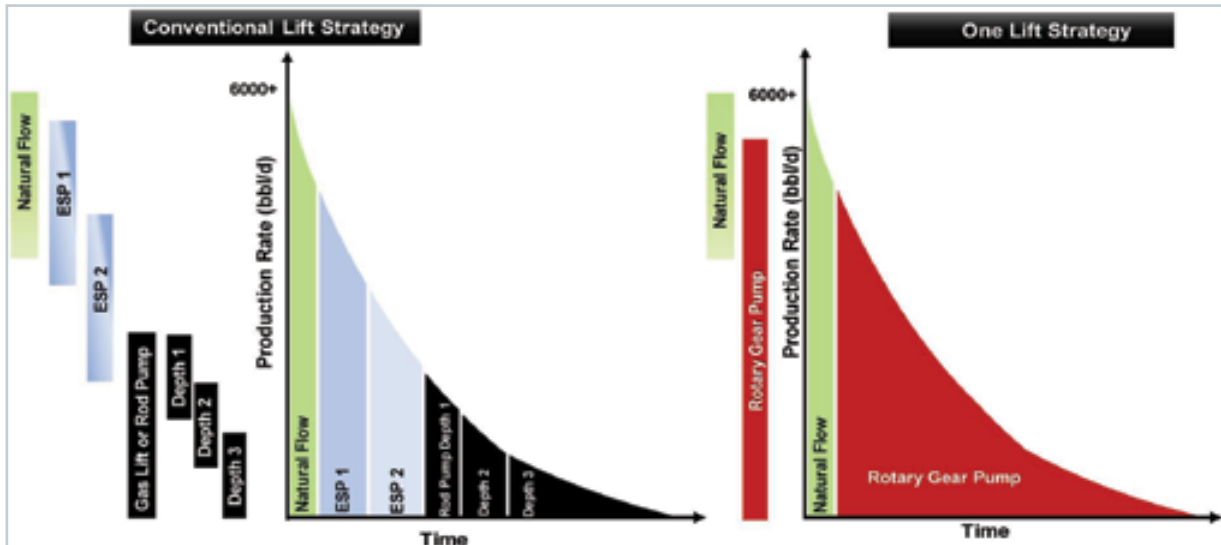


Figure 1—Conventional Strategy vs One Lift Installation

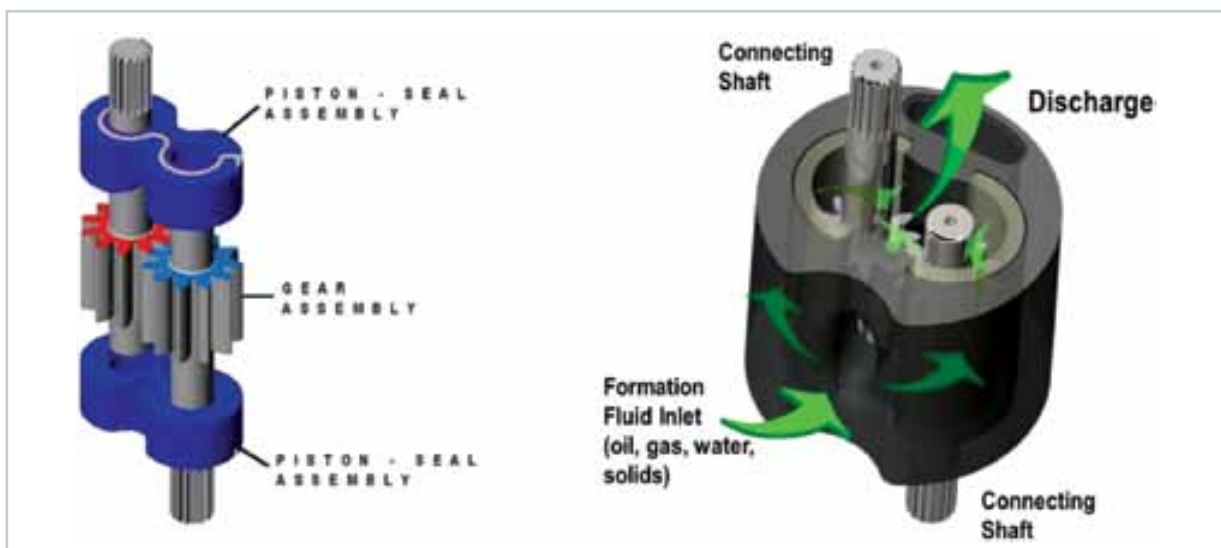


Figure 2—Rotary Gear Pump Stage illustrating Flow Profile

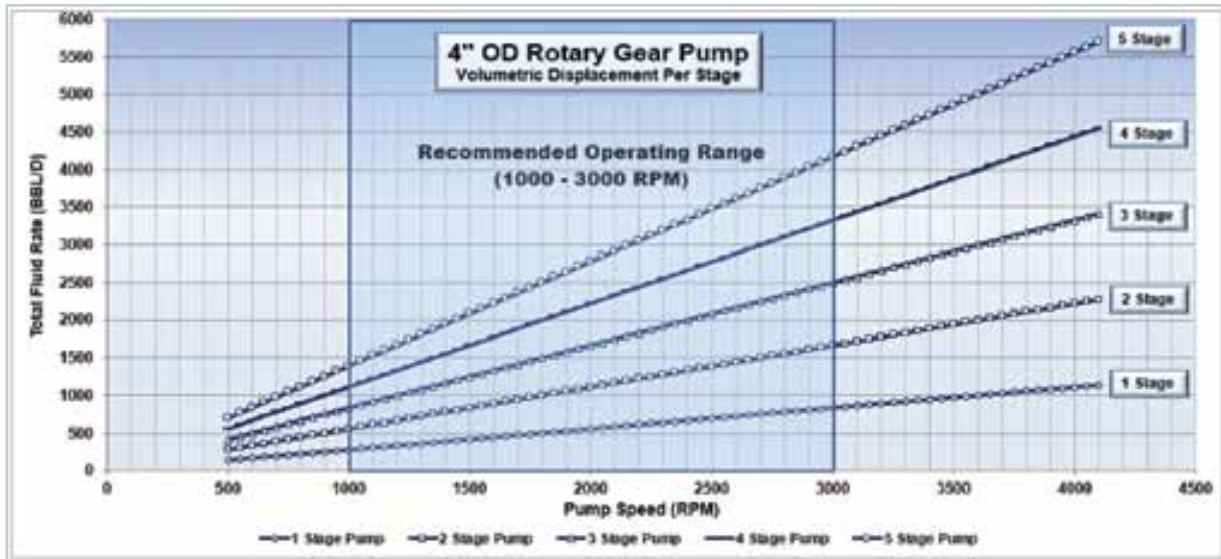


Figure 3—Flow Directly Related to Speed at 1:1

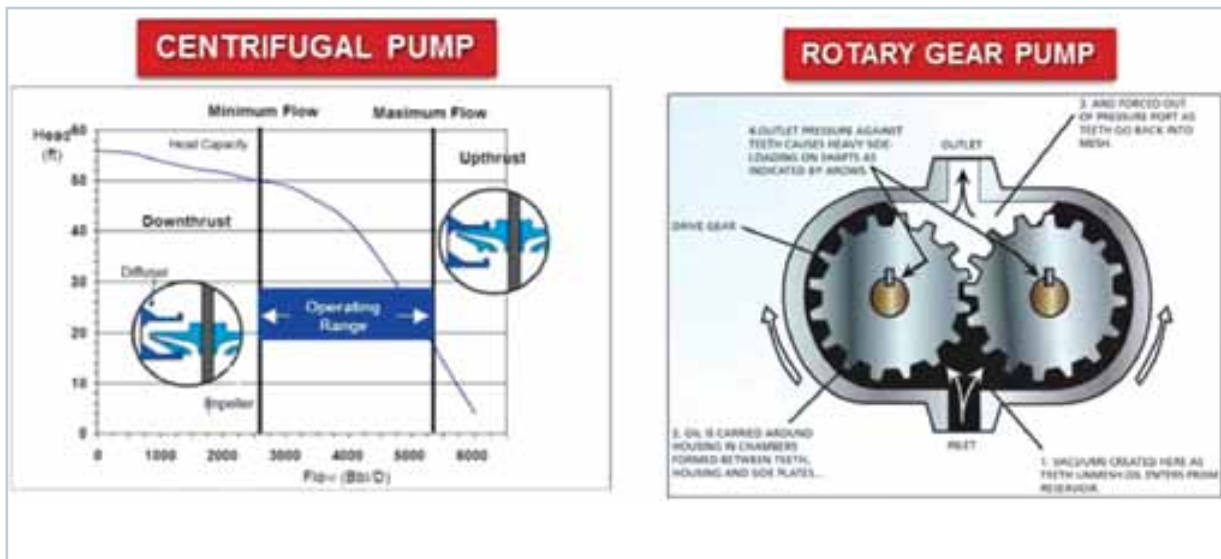


Figure 4—Fundamental Pump Thrust Differences between a Gear Pump and a Centrifugal Pump

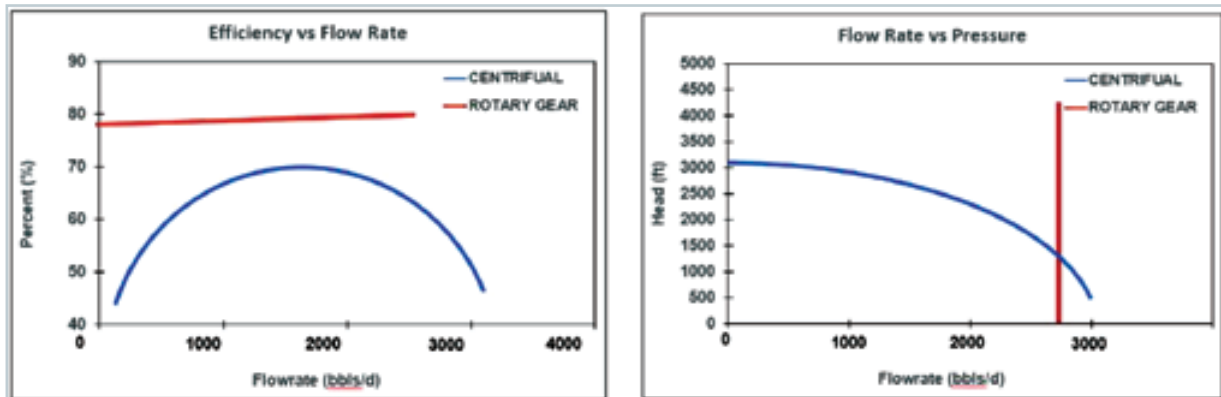


Figure 5—Performance comparison curves that show how both centrifugal and positive displacement gear pumps duty are affected by different factors.

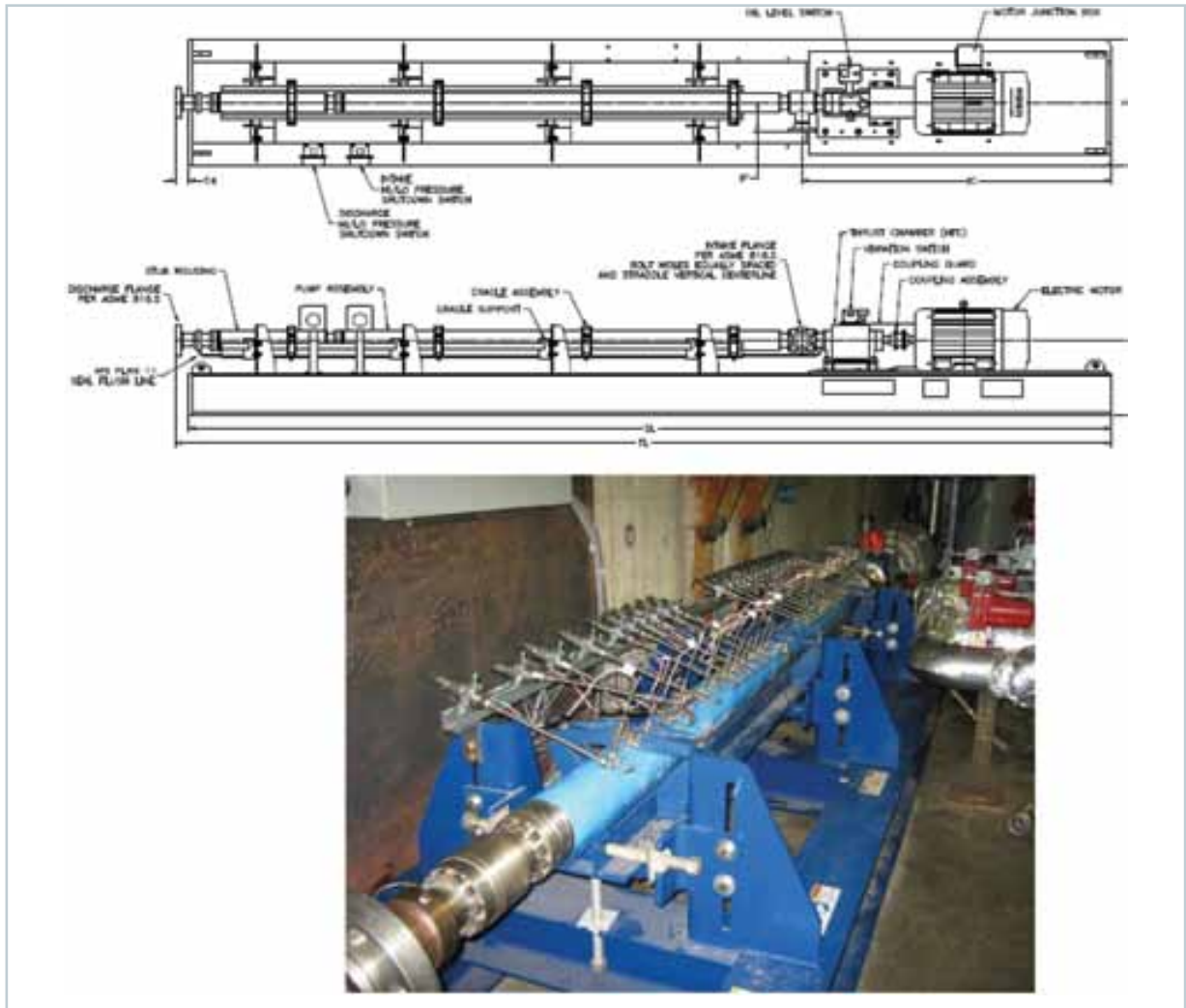


Figure 6—HPS Flow Loop Testing Apparatus

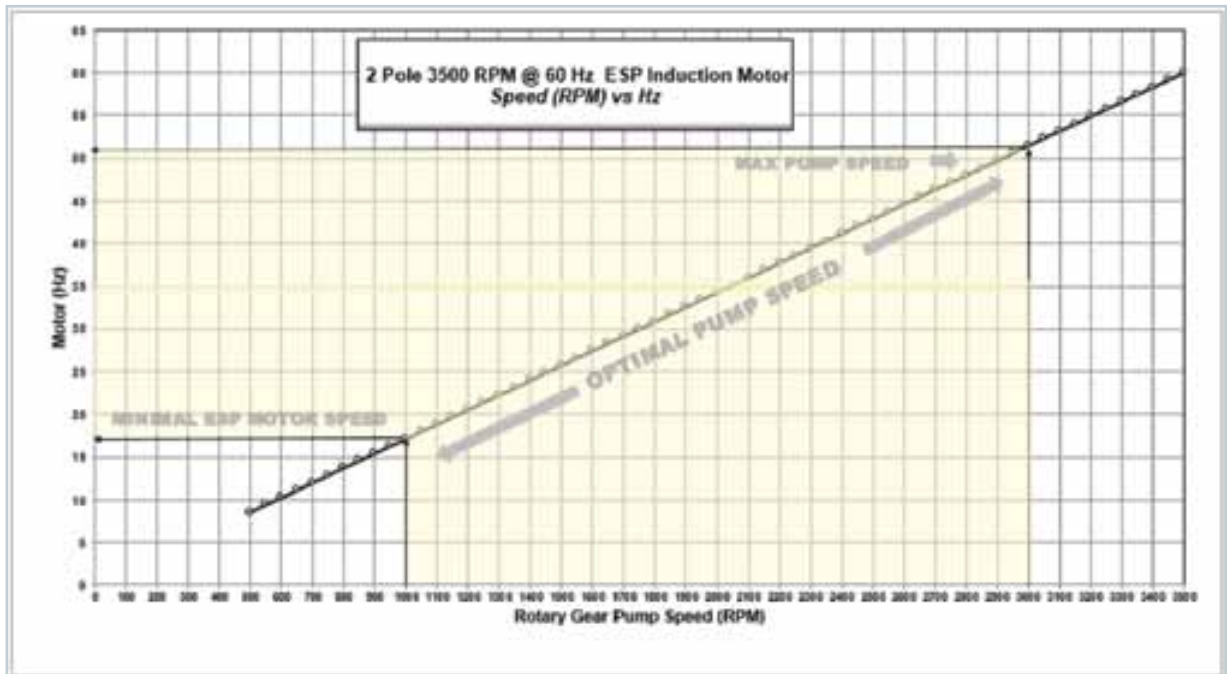


Figure 7—Optimal Operating Range, Pump Speed (RPM) vs Motor (Hz)

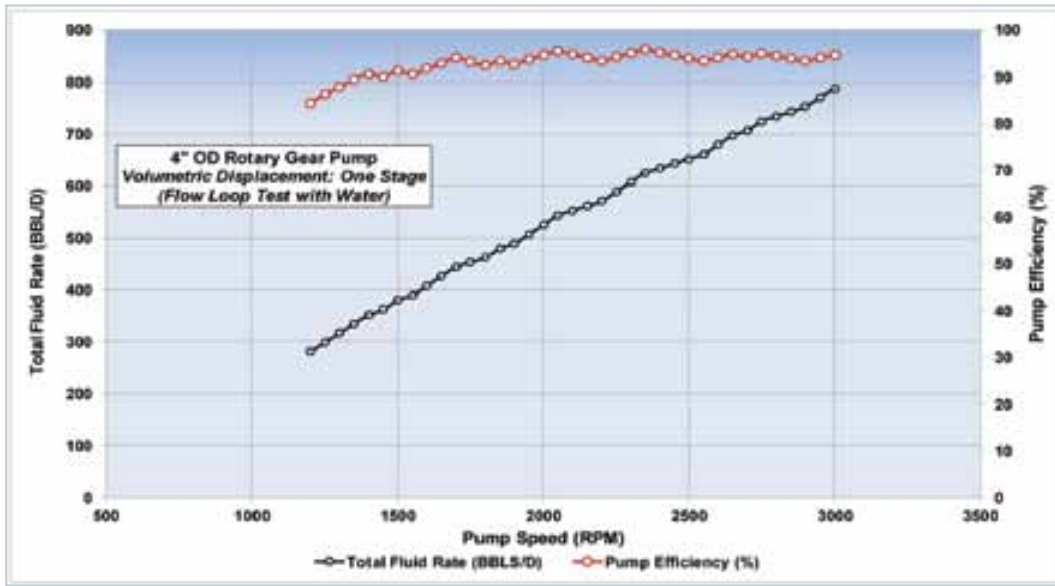


Figure 8—Pump Displacement and Efficiency at Various RPMs (No Backpressure)

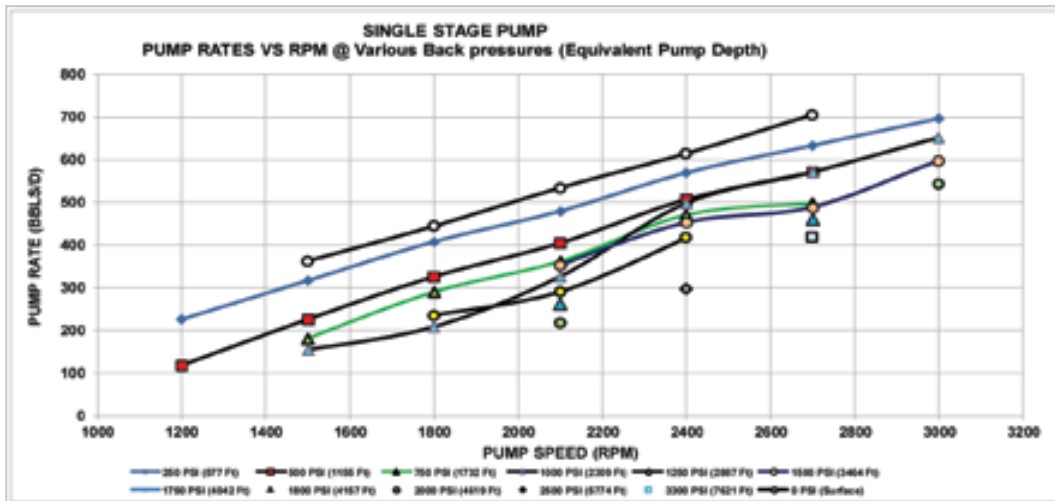


Figure 9—Pump Rates vs RPM at Various Back Pressures

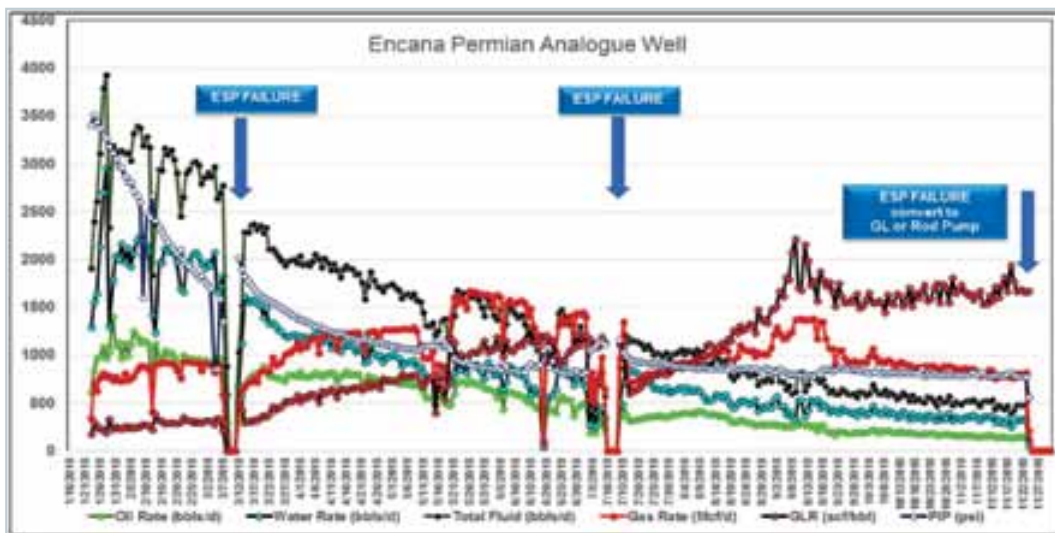


Figure 10—Permian Analogue Production Graph Illustrating Transition Period

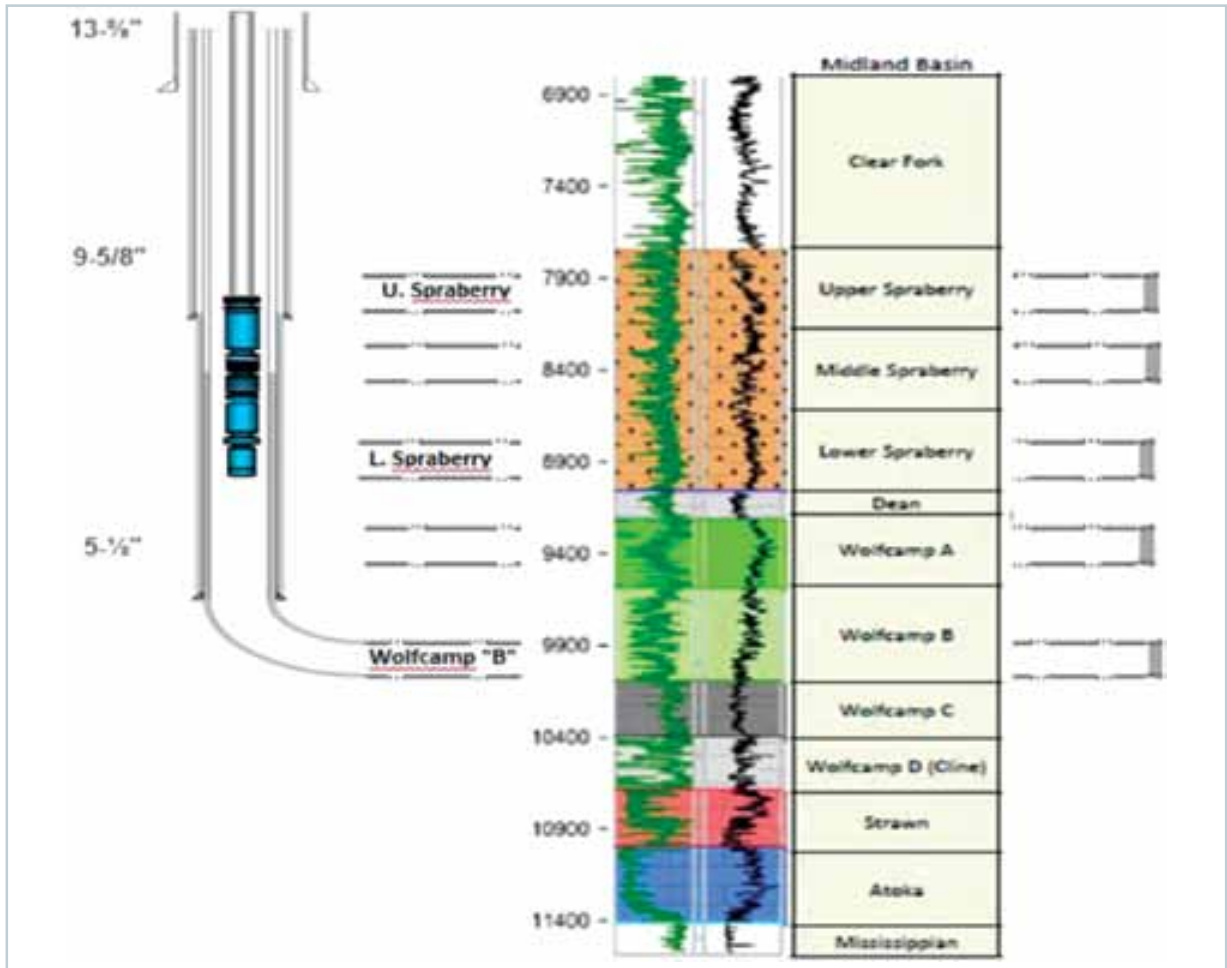
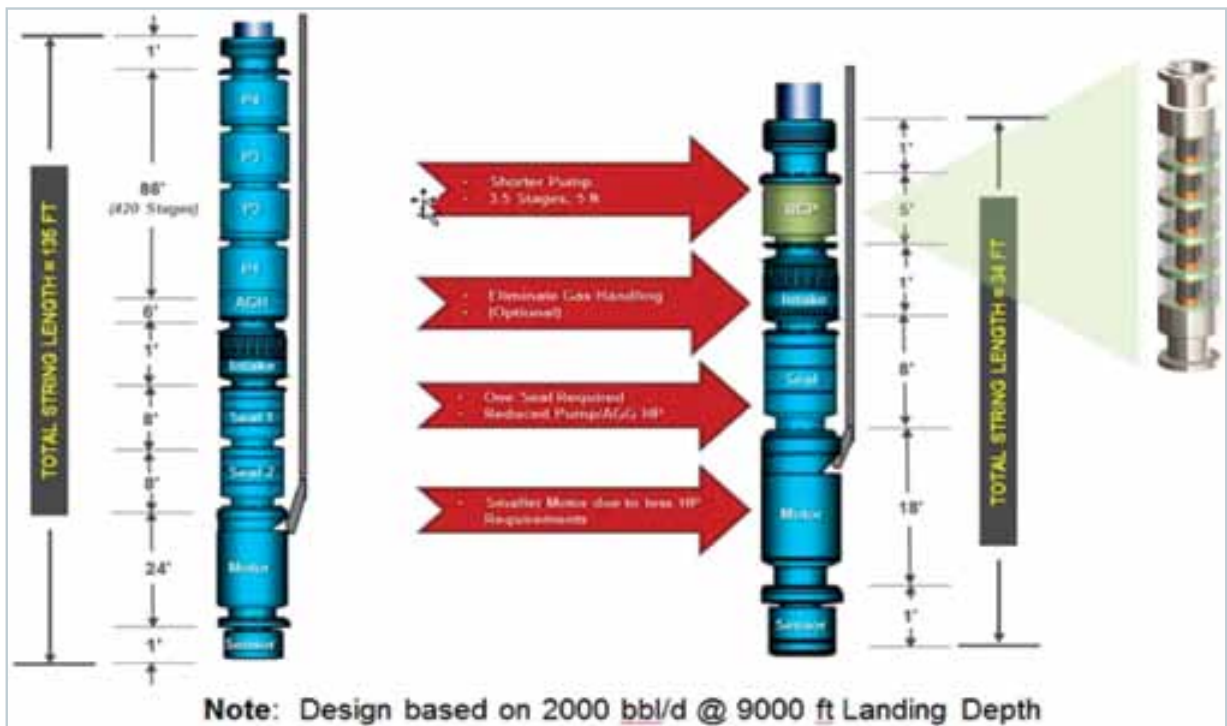


Figure 11—Midland Basin Geological Producing Horizons



Note: Design based on 2000 bbl/d @ 9000 ft Landing Depth

Figure 12—ESP vs RGP: Comparative Overall Production String Length



تحت رعاية فخامة الرئيس عبد الفتاح السيسي رئيس جمهورية مصر العربية
HELD UNDER THE PATRONAGE OF HIS EXCELLENCY ABDEL FATTAH EL SISI, PRESIDENT OF THE ARAB REPUBLIC OF EGYPT



13 - 15 FEBRUARY 2023
EGYPT INTERNATIONAL EXHIBITION CENTER

SUPPORTED BY



JOIN US NEXT WEEK

THE LEADING OIL, GAS & ENERGY SHOW
FOR NORTH AFRICA AND THE MEDITERRANEAN REGION



35,000+
Sqm Exhibition Space



32,000+
Attendees



2,000+
Delegates



500+
Exhibitors



260+
Speakers



65+
Conference Sessions



26
NOCs, IOCs & IECs



12
Country Pavilions



3
Dedicated Features



2 WAYS YOU CAN PARTICIPATE AND JOIN US AT EGYPS 2023



REGISTER
AS A DELEGATE
EGYPS.COM/DELREG



REGISTER
AS A VISITOR
EGYPS.COM/VISREG

EGYPS.COM



#EGYPS
#EGYPS2023



STRATEGIC PARTNER



DIAMOND SPONSORS



PLATINUM SPONSORS



GOLD SPONSORS

SILVER SPONSORS



BRONZE SPONSORS



ORGANIZED BY



INDUSTRY AT A GLANCE

by: Ali Ibrahim

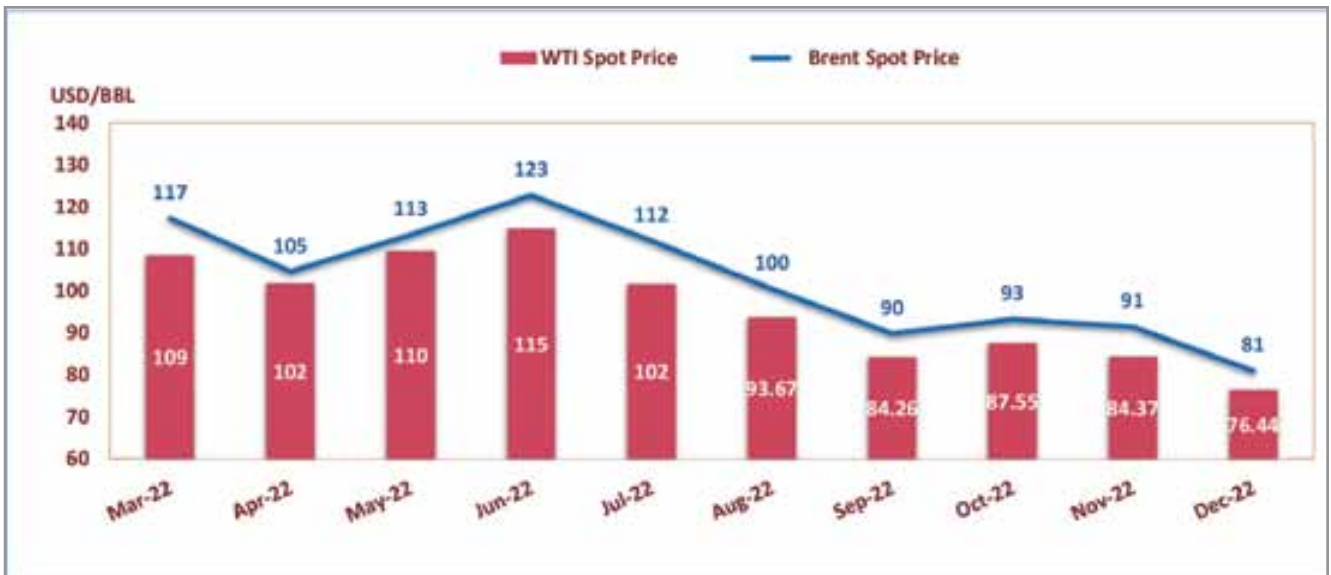
World liquid fuels production and consumption balance (MMBPD)
million barrels per day



OPEC Crude Oil Production



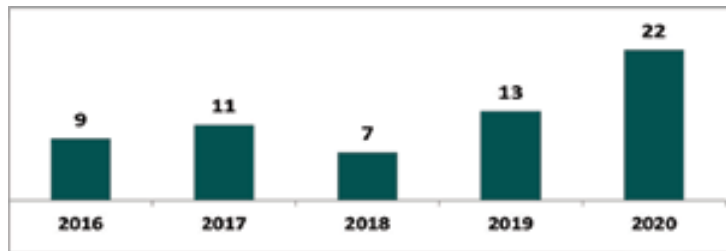
Crude Oil Prices



NYMEX Natural Gas Prices

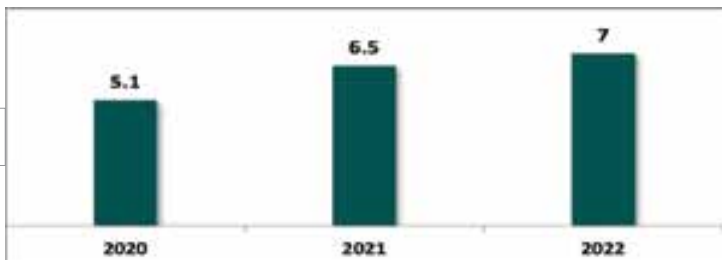
USD/Million BTU





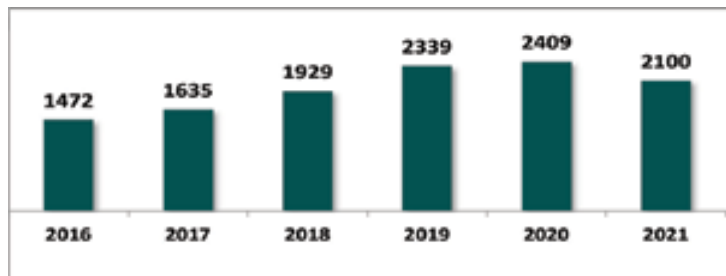
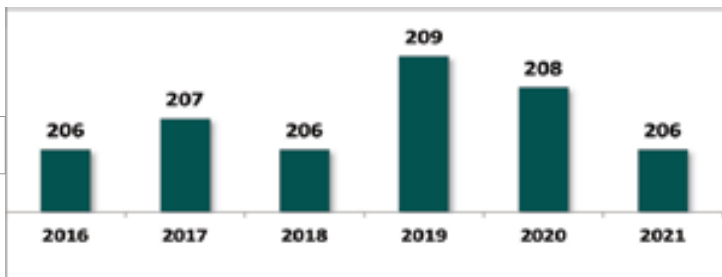
Egypt's Signed Petroleum Agreements

Egypt Petroleum FDI (\$ Billion)



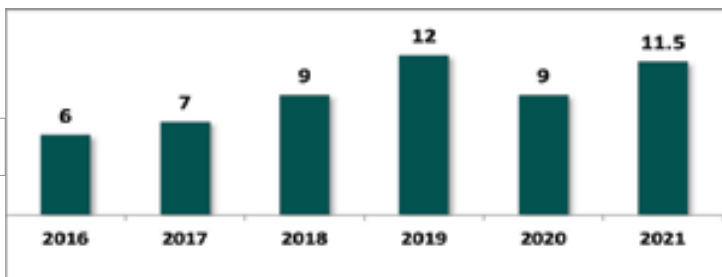
Egypt's Crude Oil Discoveries

Egypt Oil production (mmbbl)



Egypt Gas production (BCF)

Egypt's Petroleum Exports (\$ Billion)





ADMASCO OIL FIELD SERVICES CO.

Established in Egypt in 1982 as a free zone company under the investment law number 8 / 1997

Admasco committed to facilitate its esteemed customers with professional services, quality products, timely deliveries and excellent pre and post-sales supports through highly qualified Admasco team and pioneered principals.



CAMTECH Manufacturing FZCO

API 6D, API 6A, API Q1 Valves Manufacture of Ball, Gate, Globe, Butterfly, Check and Pigable Valves



NOV Process & Flow Technologies US, Inc.

Choke Valves
NOV-MD Totco
Rig Instrumentation, Gauges, Recorders & Mud Monitoring Systems



Hoffer Flow Controls, Inc.

Turbine Flow Meter for Fluid, Gas, Water and Steam



TRANSNEFT Diascan JSC-Russia

Smart pigs in-inspection tools with diameters from 6»-48»
USK Series(WM)-MSK Series(MFL)-(MFL+TFI)-(MFL+WM+CD)-MSK Series(TFI)



Puplic Joint-Stock Company - PAO Severstal - Russai

SAWL Pipes & Accessories from 20 in. up to 56 in.
API-5L, X52 - X60 - X70 - X80 - PSL 1 & PSL 2



Rustavi Metallurgical Plant

Carbon Steel Seamless pipe up to 16»



JVS Flow Control

Chock Manifold- Chokes & Gate Valves
Drilling equipment repair and recertification.



TripleFast Middle East Ltd.

Manufacturer of a Bolting Gaskets, Seals and Machined Components



Work Shop



Admasco Work Shop

ISO / IEC 17025 & 4126 - 1 Accreditation for Pressure Gauges, Transducer, Safety Relief Valves and Hydrostatic Test for Hoses, Pipes, Valves, BOPs & Vessels according to ASME B31.3
ISO 1402 - API 570 - API 598 - API 7K & 16C – API RP 53 and API 510



والتي اكتسبتها من خلال العمل علي مدار ٢٥ عاماً في قطاع البترول وخارجه وذلك الأمر يتيح لها إمكانية تنفيذ المهام الطارئة والعاجلة بجودة وكفاءة عالية مما يساعد في سرعة تلبية إحتياجات ومتطلبات عملائها المختلفين.

ما هي الرؤية المستقبلية للشركة والخاصة بالتوسعات وتقديم خدمات أكثر للشركات خاصة في ظل القيادة الجديدة؟

تهتم بترومنت في الفترة الحالية في التوسع في أعمال الصيانة الشاملة داخل مصر وخارجها والعمل علي فتح أسواق خارجية جديدة في بعض الدول العربية والافريقية مثل (الأردن - السعودية) ، كما تهتم شركة بترومنت في ظل الرؤية الحديثة للدولة بتقديم أفضل طرق التكنولوجيا الحديثة وإتباع الاساليب المستحدثة في كل مجالات الصيانة والإنشاءات البترولية وذلك أيضاً من خلال حصول ورش التصنيع بالشركة على شهادات (U.S&RStamp) وشهادة ال Stamp ASME وتوسع الشركة في الوقت الحالي للحصول على شهادة ال CE MARK وذلك لحرصنا على تعظيم دور المنتج المحلي لكي تتمكن الشركة من تصدير منتجاتها الى خارج البلاد وايضاً فتح مجالات جديدة تمكنها من التعاقد مع بعض الشركات الأجنبية مثل شركة نوفارجى الأسبانية وديسكنفري اويل الامريكية وتستهدف الشركة في رؤيتها المستقبلية تصدير منتجاتها لبعض الدول الأوروبية حيث تقوم الشركة في الوقت الحالي بدراسة بعض التعاقدات الخارجية لتتمكن من تحقيق أهدافها.

كيف تهتم الشركة بالعنصر البشري من حيث التدريب ورفع المستوى الاداري والتقني؟

يعد العنصر البشري هو الركيزة الاساسية التي تعتمد عليها شركة بترومنت في تنفيذ جميع أعمالها حيث تقوم شركة بترومنت بالحفاظ على أعلى مستوى لاداء كوادرها وتنمية مهاراتهم عن طريق تنفيذ دورات تدريبية بشكل منتظم بما يتناسب مع إحتياجات السوق لتقديم الأعمال بأعلى جودة و كفاءة.

ما هي أهم نشاطات الشركة الاجتماعية؟

تشارك شركة بترومنت بشكل فعال في التنمية المجتمعية من خلال تنفيذ الأنشطة المختلفة منها المساهمة لجميع الجهات المعتمدة للعمل الاجتماعي علي سبيل المثال (جمعية الهلال الأحمر المصري - بنك الطعام المصري - جمعية الاورمان من خلال تجهيز وتوزيع شنت مواد غذائية بمناسبة شهر رمضان المبارك) .

ومن ضمن أنشطة الشركة إقامة تدريب صيفي لطلاب الجامعات المصرية للحث على المشاركة الفعالة للطلبة في المجتمع والتعرف على سوق العمل ونقل الخبرات العلمية والعملية.

ماذا عن إجراءات السلامة والصحة المهنية وحماية البيئة التي تتبعها الشركة في مواقع العمل المختلفة ، خاصة مع التغيرات المستمرة للأوضاع؟

تلتزم شركة بترومنت بأعلى معايير الجودة في أعمالها طبقاً للمواصفات الدولية في هذا الشأن كما تتبع نظام إدارة الجودة والسلامة والصحة المهنية والبيئة وايضاً تعليمات الهيئة المصرية العامة للبترول للحفاظ على بيئة العمل وتقليل المخاطر المحتملة والاثار البيئية والتحكم فيها بأكبر قدر ممكن لتجنب الحوادث المترتبة على ذلك والحفاظ على الارواح والممتلكات وحماية البيئة ، ودير بالذكر أن بترومنت تطبق نظام متكامل لإدارة الجودة والسلامة والصحة المهنية والبيئة طبقاً لمتطلبات المواصفات الدولية ISO 9001:2015 في إدارة نظم الجودة و ISO 45001:2018 في إدارة نظم السلامة والصحة المهنية و ISO 14001:2015 في إدارة نظم البيئة.

وتسعى بترومنت خلال هذا العام للتأهل للمواصفات الدولية ISO 22301:2018 الخاصة بإدارة إستمرارية الاعمال و ISO 50001:2018 الخاصة بإدارة نظم الطاقة.

كما تؤكد بترومنت على ان الجودة والصحة والسلامة المهنية وحماية البيئة هي مسؤولية الجميع وتعمل جاهدة على تحسين وعى جميع

العاملين لديها بذلك وجعله جزءاً لا يتجزأ من ادائهم ، كما تلتزم بترومنت بمشاركة ومشاورة العمال وممثليهم في عمليات صنع القرار الخاصة بنظم إدارة الصحة والسلامة المهنية والبيئة.

بلمحة من خبراتك ما هي التوقعات

التقريبية لصناعة البترول والطاقة

في الفترة المقبلة محلياً وعالمياً؟

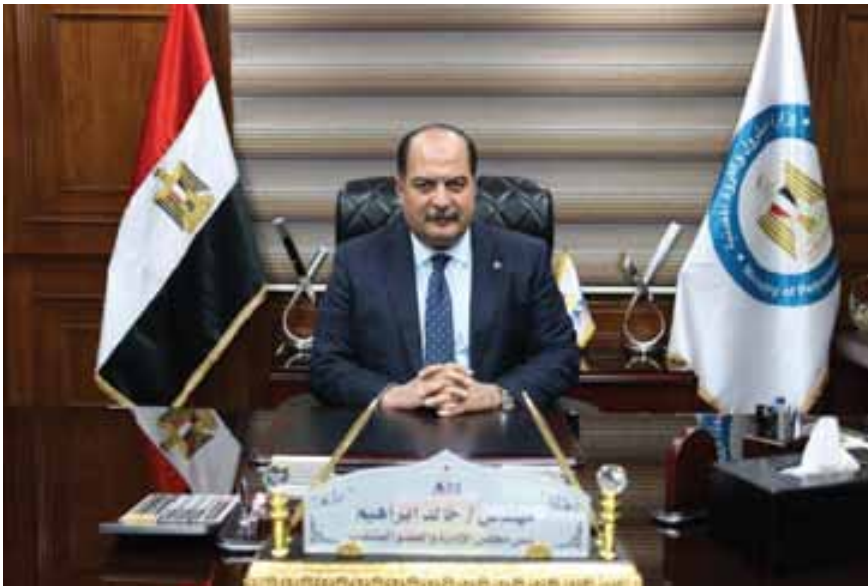
في ضوء ماتم بذله من جهود خلا ٢٠٢٢ الملىء بالتحديات من أجل زيادة الإنتاج وايضا الإسراع بتطوير وتحديث البنية التحتية بما يمكننا من مواجهة التحديات والصعوبات المحلية والعالمية في اسواق الطاقة والمضي قدماً في تحويل مصر الي مركز اقليمي للطاقة باستغلال موقعها المتميز في المنطقة وايضاً تحديث اساليب جذب الإستثمارات الأجنبية للبحث عن البترول والغاز في مصر بإتباع أفضل الممارسات العالمية بما انعكس إيجابياً على جذب شركات كبرى جديدة في مصر لزيادة حجم الإستثمارات وزيادة معدلات الإنتاج المحلي من البترول الخام وبعض المنتجات البترولية وكذلك الأتجاه بصورة كبيرة نحو تصدير الغاز للمساهمة في حل ازمة نقص الطاقة بأوروبا ، حيث أصبح توجه العالم أجمع للطاقة الخضراء والتنظيفة لذلك نتوقع زيادة التحول التدريجي للطاقة الخضراء والتنظيفة ونعمل جنباً الى جنب على تحقيق توجهات الدولة ووزارة البترول المصرية لتكون مصر رائدة في هذا التحول بما يتناسب مع امكانياتها وبما يجعل مصر مركزاً عالمياً للطاقة بمختلف اشكالها.



حوار صحفي مع المهندس

خالد ابراهيم

رئيس مجلس الإدارة والعضو المنتدب
لشركة بترومننت



مع احتفالاتها باليوبيل الفضى نود إلقاء الضوء على اسم شركة بترومننت اللامع وطبيعة عملها والخدمات التي تقدمها ؟

تقدم شركة بترومننت مجموعة كبيرة من الخدمات والحلول لمنشآت التنقيب والإنتاج والتكرير والبتروكيماويات والاسمدة وصناعة الاسمنت والغاز الطبيعي وتوليد الطاقة والمنشآت الصناعية لدعم عملائها وتلبية متطلباتهم وتوقعاتهم وذلك من خلال القوة العاملة المجهزة بشكل مناسب والمؤهلة تأهيلاً عالياً وذات مهارات جيدة حيث تقوم شركة بترومننت على سبيل المثال لا الحصر بتقديم الخدمات الآتية:

في مجال الصيانة الشاملة :

- صيانة معدات الآلات الثابتة مثل أبراج التقطير والمبدلات الحرارية والمفاعلات.
- صيانة الآلات الدوارة ومنها الضواغط والتوربينات والمضخات وايضاً صيانة ومعايرة واصلاح جميع انواع البلوف باستخدام أحدث ماكينات المعايرة.
- صيانة المعدات والأجهزة الدقيقة وتشغيل وصيانة محطات الطاقة الكهربائية وغيرها.
- القيام بأعمال العمرات الطارئة والمخططة والعمرات الجسيمة بكفاءة وسرعة إستجابة عالية.
- كما تتميز شركة بترومننت بالقيام بأعمال قياس وتحليل الإهتزازات بأحدث الاجهزة والتقنيات العالمية وذلك بأتباع المواصفات والأكواد العالمية

منذ متى بدأت الشركة فى تقديم خدماتها لشركات قطاع البترول؟

تأسست شركة إسكندرية للصيانة البترولية «بترومننت» عام ١٩٩٧ حيث تمتلك الشركة العديد من المهندسين المتخصصين والعماله الماهرة والمعدات الحديثه التى تساعدها فى إنجاز أعمالها حيث تعتمد ثقافتنا على أساس الصدق والنزاهة والموثوقية والتحسين المستمر.

ما هى الميزة التنافسية التى تتمتع بها شركة بترومننت؟

تمتلك بترومننت العديد من التخصصات والخبرات الفنية المتنوعة والمنتشرة بجميع المواقع على مستوى جمهورية مصر العربية

طبقاً لمعايير السلامة والصحة المهنية. في مجال المشروعات:

- أعمال الإنشاءات والإحلال والتجديد للمنشآت البترولية وأبراج التقطير والمستودعات والخطوط وتسهيلات الإنتاج.
- أعمال الإنشاءات المدنية والطرق والمباني.
- أعمال الإنشاءات والصيانة لمحطات المياه والصرف الصحى ومحطات الرفع والشبكات.
- وفى مجال المشروعات البحرية:
- أعمال وتشغيل وصيانة الوحدات البحرية ذات الحمولات المختلفة وارصفة تداول المنتجات البترولية.
- أعمال تأهيل ورفع كفاءة شمندورات شحن النفط الخام والمنصات البحرية.

Hady Meiser Egypt is an Egyptian German joint venture investment that manufacture bar gratings with high quality and prices than their imported which used in various fields as petroleum companies – Power stations – Cement companies – Fertilizers company , spiral stairs and slitting coils.

Hady Meiser grating is acknowledged by trade specialists to be one of the best product of its kind in Europe , It's a fair assessment, we feel and part of the reason is undoubtedly the committed work of our planning department and our reliable delivery dates.

What is the gratings ?

Try asking non- experts what a grating is « a grating ?» , most of them will reply « a grating is a kind of floor on which you can stand safely, but when you look down , you get the feeling you're standing in mid-air.

Indeed , more than 80% of any grating does exist of holes, we simply exploit the fact that a strip of metal positioned .

Perpendicularly and anchored securely can carry substantial load.

Gratings Specification :

our gratings enjoy various specifications they have different sizes of bearing bars starting from 25x 3 mm . up to 50 x 5 mm and fences .

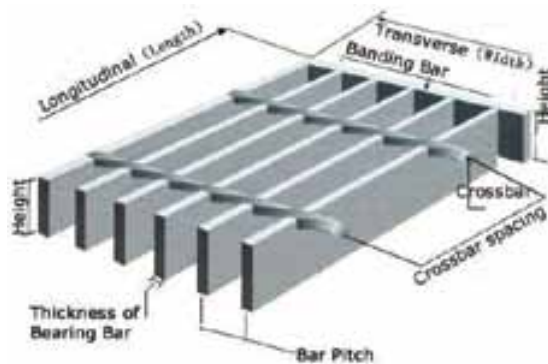
and twisted cross bars 5 mm. or 6 mm in addition to the possibility of manufacturing the serrated grating which are specially made for the petroleum companies

Slitting coils :

In addition that it has been inserted a new production line for rod slitting coils (black-galvanized – hot – cold) in thickness starting from 1 mm up to 4 mm

Mr. Taha Abou Rabia

General Manager



Head office :

2 Asma Fahmy St, Heliopolis, Cairo, Egypt
 Tele : (+202)24175822 - 22903879
 Fax : (+202) 26903694 - 22919273
 E-mail : Trabia_meiser@hadymeiser.com
 website: www.hadymeiser-egypt.com

Factory :

ElShrouk Industrial Zone – Khanka – Kaiobia
 Tele : +2 02 44564091 - 2
 Fax : +2 02 44564093 - 44698212
 Mobile : 01001726068 – 01144877633
 01276798800 – 01001726135
 E-mail : trabia.meiser@gmail.com



فريق عمل ايجيترانس فى مشروع نقل إحدى محطات توليد الكهرباء من الرياح

الديون، وخاصة البلاد ذات الديون المرتفعة. وعلى مستوى قطاع النقل والشحن البحري، والذي يساهم بحوالي ٥% من إجمالي الاقتصاد العالمي، فإن المنطقة العربية، تحديداً، تواجه العديد من التحديات التي عليها ان تعالجها لتتجاوز ما يشوبها من تأخر عن النمط العالمي في النقل البحري. ومن أبرز هذه التحديات عدم توافر التقنيات المناسبة لتفريغ وتخزين وتحميل السفن بأسرع وقت وبكلفة أقل، وعدم ربط الكثير من الموانئ العربية بشبكات الطرق الدولية البرية أو الحديدية التي تعمل على إعادة توزيع البضائع على الدول المجاورة، وكذلك عدم وجود المناطق الحرة التي تسمح بإعادة شحن البضائع على سفن أصغر حجماً للدول المجاورة، والقدرة الضعيفة على المنافسة العالمية في هذا المجال. ولذلك، فعلى حكومات المنطقة العربية، أن تتعامل مع النقل البحري على أنه كيان اقتصادي مستقل يعمل على زيادة الموارد، ويكون تحت مظلة إدارية أفضل بعيداً عن الروتين والتعقيدات التي تشكل عائقاً أمام تطوير أدوات هذا القطاع الهام. وكذلك زيادة الاستثمار في قطاع تكنولوجيا البنية التحتية وإدارة الموانئ، الأمر الذي ينعكس إيجابياً على سهولة انسياب البضائع وارتفاع مستوى العمل.

هذا البلد من شوط في التخلص من آثار جائحة كورونا، والتي مازالت الكثير من البلدان تعاني من آثارها حتى الآن، كما يرتبط الأمر بشكل اساسي بمدى ما يحققه الاقتصاد العالمي من سرعة في الأداء، وعلى رأسه اقتصادات الصين والولايات المتحدة ومنطقة اليورو.

ولمواجهة هذه التحديات بشكل أكثر فعالية، فعلى بلدان منطقة الشرق الأوسط وافريقيا أن تتحلى بالمرونة في تطبيق نظم الحوكمة، ووضع خطط النمو الطويلة الأجل، وإجراء المزيد من الإصلاحات التي ترفع من معدل الشفافية، وتعزيز مفاهيم الاقتصاد المستدام. وكذلك لا بد من التوجه إلى المزيد من إتاحة البيانات والمعلومات، والذي من شأنه أن يساعد على إدارة الأزمات والمخاطر التي تواجه اقتصاديات المنطقة.

وللتقليل من الآثار السلبية للانخفاض في مستوى النمو، سيكون على الحكومات أن تزيد من حجم الإعانات والتحويلات النقدية التي تقدمها للسكان ليتمكنوا من مواجهة ارتفاع أسعار السلع، بدء من الغذاء وحتى الطاقة بمختلف أنواعها. وفي البلدان التي لا تملك الإيرادات الكافية لذلك، وخاصة تلك المستوردة للطاقة، سيكون عليها تطبيق برامج لخفض أوجه الإنفاق المختلفة، وإيجاد مصادر جديدة للإيرادات، والا سيكون هناك اتجاه للاقتراض لمواجهة العجز في الميزانية، إلا انه ومع ارتفاع اسعار الفائدة عالمياً ستواجه الدول المقترضة المزيد من الأعباء المالية الخاصة بخدمة

من التأثير البيئي والاجتماعي والاقتصادي للشركة. كما انه ومن المتوقع ان تتم الشركة صفقة الاستحواذ المحتملة على شركة "نوسكو" بعد الانتهاء من الإجراءات اللازمة لهذه الصفقة التي ستعزز من قوة مجموعة ايجيترانس على المنافسة في قطاع النقل البري بمصر وبتيح فرص التوسع في دول أخرى بالمنطقة. وكذلك تستكمل ايجيترانس عمليات إعادة الهيكلة التي تهدف من خلالها للتحويل إلى شركة رئيسية تدير أنشطتها من خلال الكيانات التابعة الحالية والمستقبلية، وذلك من خلال تخصيص كل شركة لأحد أنشطة المجموعة، مع وضع كافة الاستراتيجيات وخطط العمل الخاصة بها والهيكل الإداري لها. كما تستمر ايجيترانس في بحث ودراسة الأسواق الجديدة في منطقة الشرق الأوسط وافريقيا التي تراها الشركة سوقاً واعداً، وكذلك دراسة عدد من الشراكات المختلفة والمتنوعة بين المحلي والاقليمي والعالمي، وكذلك العمل على جذب المزيد من الاستثمارات الاستراتيجية، وبحث المزيد من فرص الاستحواذ والاندماج، واستكمال الخطط التوسعية التي تحرص ايجيترانس على وضعها وتنفيذها سواء على المدى القريب أو البعيد. وذلك بالإضافة إلى ما تقوم به ايجيترانس من تطوير للشركات التابعة، ومنها شركة "ايتال" والتي تمتلك اسطولاً متخصصاً من معدات النقل الثقيل، أهلها للفوز بنقل العديد من المشروعات الكبيرة في العاصمة الإدارية الجديدة ومشروع القطار الخفيف وغيره من مشروعات مزارع الرياح بمنطقة خليج السويس. وكذلك شركة "إيه دي إس" المتخصصة في تنظيف وإصلاح حاويات البضائع السائلة أيزوتانك، التي أصبحت تستحوذ على ٦٠% من نشاط السوق المحلية.

ما هي توقعاتك لمنطقة شرق المتوسط؟

حسب تقارير البنك الدولي، فإن منطقة الشرق الأوسط وافريقيا ستشهد انخفاض في مستوى النمو خلال عام ٢٠٢٢ بنسبة ٢,٥%، رغم ما حققته من نمو خلال العام الماضي بنسبة وصلت ٥,٥%، وهو يمثل اسرع معدل للنمو حققته المنطقة منذ عام ٢٠١٦. ومن المتوقع أيضاً ان تختلف نسبة نمو الاقتصاد من بلد لآخر تبعاً للعديد من العوامل، منها مدى القدرة على امتصاص صدمة الحرب الروسية الاوكرانية، وكذلك مدى ما قطعته



كساحات ايجيترانس أثناء نقل برج النقطير الضخم لمشروع شركة ميدور حيث كان وزن البرج ٣٧٥ طن و ٦٨.٦ طول و ٧.٥ عرض و ٧.٣ ارتفاع

من السوق المصري والاقليمي، وذلك من خلال جذب العملاء الجدد وتنمية زيادة حجم الأعمال مع العملاء الحاليين. وكذلك حرص ايجيترانس على تحقيق النمو المستدام، وتحقيق أعلى درجات الكفاءة ومواصلة العمليات التشغيلية عالية الجودة والسرعة.

ما هي آخر تطورات ايجيترانس؟

انضمت ايجيترانس إلى ائتلاف شركاء التحول الأخضر "GTP" الذي يتكون من ٢٢ من شركات القطاع الخاص المصرية في مجالات الطاقة، والنقل، وإعادة تدوير الطاقة والمخلفات، والتنمية العقارية والتمويل المستدام، والعمل الأهلي تبني سياسة التحول الأخضر وتتخذ بالفعل خطوات في مجال قياس وإدارة بصمتهم الكربونية. كما انضمت الشركة إلى شبكة ReverseMi اللوجستية كممثل حصري لها في مصر، وهي شبكة عالمية لوكلاء الشحن الذين يخدمون سلسلة توريد الخدمات اللوجستية العكسية تهدف إلى التعامل مع حركة البضائع بشكل احترافي لإعادة التدوير والتجديد وإعادة الاستخدام وتلبية متطلبات صناعة الخدمات اللوجستية العكسية. فاللوجستيات العكسية ظاهرة منتشرة على مستوى العالم لها آثار بيئية إيجابية حيث تمكن الشركات من إيقاف عمليات الإرجاع غير الفعالة التي تؤدي إلى عمليات نقل إضافية غير ضرورية، وبذلك تقلل

ان الاقتصاد يحاول التعافي، وكذلك نحن في ايجيترانس، نحاول ان نساير خطوات الاقتصاد، ولكن لا نبالغ اذا قلنا اننا نسبق بخطوات والا لما استطعنا بفضل الله الاستمرار رغم الظروف الصعبة التي تمر بها التجارة العالمية منذ سنوات. والاستراتيجية الاساسية لايجيترانس للنمو ذات ابعاد متعددة، فهي شركة تجمع بين كونها شركة مدرجة في البورصة تلتزم بأعلى درجات الشفافية والحوكمة، وكذلك هي شركة تراعي الشق الانساني، ولا تتخلى عن موظفيها في أي أزمة، وتعمل باستمرار على تنمية مواهبهم وقدراتهم، فالعامل البشري في ايجيترانس يحتل المرتبة الاولى في الاستراتيجية العامة للنمو على مدى تاريخها وستظل عليه كذلك إلى ما شاء الله. كما انها تحرص على توفير أفضل الخدمات لعملائها في اصعب الظروف، الأمر الذي يجعلها، في معظم الأحيان، الاختيار الأول للعميل، وهي شركة، رغم أي تغييرات، تسعى دائماً للتطوير والتوسع المرتبط بأحوال السوق، دون توقف أو عجلة، فهي شركة تحسب خطواتها جيداً، تلك الاستراتيجية المتعددة الجوانب، اعتقد في رأيي هي سر النمو الدائم والمستمر للشركة على مدى تاريخها. وكل ذلك بالإضافة لاستمرارها في وضع خطط التوسع الرأسي والافقي، سواء بإنشاء كيانات جديدة، أو زيادة عدد الخدمات ورفع كفاءة الأداء، والسعي الدائم لزيادة حصة ايجيترانس

ايماننا بأن قطاع البترول والغاز يتمتع بالقدرة على مواجهة التحديات التي يمر بها الاقتصاد العالمي نتيجة لما يشهده من أزمات على مدى السنوات الماضية، خاصة وانه يشهد توسعاً كبيراً واهتمام من الدولة المصرية التي تسعى لتحويل مصر لمركز اقليمي للطاقة، وذلك في ضوء المشروعات الجديدة الجاري تنفيذها باستثمارات تُقدَّر بنحو ٨ مليارات دولار. كما نجحت ايجيترانس على مدى عام ٢٠٢٢ في زيادة حجم العمل مع عملائها الحاليين، والعمل على جذب قطاعات متنوعة من العملاء الجدد.

كيف تمكنت ايجيترانس من الحفاظ على خطط العمل وسط الظروف الصعبة خاصة في السنوات الثلاث الماضية؟

ايجيترانس شركة قوية وذات تاريخ كبير في قطاع النقل والخدمات اللوجستية، الأمر الذي يتسق مع صمودها خلال أية ظروف صعبة، مهما بلغت درجتها، ومن هنا استطاعت ايجيترانس ان تكون العون القوي لكافة عملائها سواء محلياً أو عالمياً خلال السنوات الثلاثة الماضية. وليس هناك من دليل على مكانة ايجيترانس في السوق من كونها تمكنت في تلك الاوضاع الاقتصادية، التي يمكننا ان نصفها بالحرجة، من ان تزيد من حصتها السوقية، وتحقق ارتفاع ملحوظ في حجم أعمالها عام ٢٠٢٢ عن العامين السابقين له. كما يعود السبب الرئيسي لقدرة ايجيترانس على الحفاظ على معدل أعمالها، وتحقيق ما تطمح اليها من خطط توسعية، في ظل اي ظروف صعبة، ولاسيما خلال الثلاث سنوات الماضية، إلى تفعيلها المستمر لقواعد الحوكمة والتطبيقات المرتبطة بها، بالإضافة إلى الاستمرار في التحسين المستمر لخدماتها، وبناء قدرات العاملين وتنمية مهاراتهم، والعمل على خلق بيئة عمل وثقافة إيجابية، وتنفيذ استراتيجية التحول الرقمي.

بينما يحاول الاقتصاد العالمي التعافي، ما هي استراتيجية ايجيترانس للنمو؟

ايجيترانس جزء من قطاع حيوي يمتد عبر السوق المحلي والعالمي في ذات الوقت، ولا يمكن الفصل بينهما، فقطاع النقل يرتبط ارتباطاً أساسياً بأحوال الاقتصاد داخلياً وخارجياً، وكما ذكرت

تحتفل ايجيترانس، هذا العام، بمرور ٥٠ عام على تأسيسها في عام ١٩٧٣، كيف تصف رحلة الشركة طوال السنوات الماضية؟ ما هي الخدمات التي تقدمها ايجيترانس؟

تعد ايجيترانس من كبريات الشركات وأعرقها في تقديم خدمات النقل واللوجستيات لكافة القطاعات الصناعية والتجارية، والخدمية، وذلك من خلال ما توفره من خدمات وحلول متميزة في مجالات النقل والشحن البحري والبري والجوي على المستوى المحلي والعالمي، بالإضافة إلى خبرتها في إدارة سلاسل التوريد والإمداد، والمخازن. تملك ايجيترانس شبكة علاقات واسعة مع كبار الوكلاء العالميين، مما يتيح لها تقديم أفضل خدمات الشحن والنقل لمختلف البضائع والعملاء في أي مكان في العالم، الأمر الذي مكنها أن تقدم للسوق المحلي خدمات بنكهة عالمية مع ارتباطها بكافة الظروف بالسوق المصرية.

فعلى مستوى الشحن البحري والجوي، تحرص ايجيترانس على تقديم منظومة متكاملة من الخدمات تشمل البحار والأجواء الإقليمية والعالمية، بما يضم البضائع العامة والحاويات بمختلف أنحاء العالم، كما تتولى ايجيترانس مهام إصدار بوالص الشحن، وتشمل خدمات ايجيترانس ما استحدثته لأول مرة في مصر مع بداية التسعينات من القرن الماضي من خدمات البضائع المجمعمة، وهو عبارة عن تجميع رسائل صغيرة الحجم والوزن في حاوية واحدة، الأمر الذي يوفر على العملاء تكاليف الشحن والتأمين، مع توفير أعلى درجات الأمان، وأقل مستوى من التعرض لمخاطر التلف. وفي إطار ريادتها لتقديم كل ما هو جديد بقطاع النقل والخدمات اللوجستية، فقد اضافت ايجيترانس لقاومة خدماتها، خدمات الاستيراد والتصدير المباشر سواء من أو إلى أماكن جديدة لتوفر لعملائها خدمة أسرع وأكثر أماناً وانتظماً وأقل تكلفة.

على مستوى النقل البري، تمتلك ايجيترانس اسطولاً كبيراً يتكون من معدات متخصصة في نقل الطرود ذات الأوزان والأحجام الشاذة بالإضافة إلى شاحنات الحاويات، مما أهلها لتكون من رائدات النقل البري. فهي من كبريات الشركات المصرية المتخصصة في تقديم خدمات النقل البري

طبقاً لأعلى معايير الجودة. وتوفر ايجيترانس لعملائها خدمات النقل البري بأسعار منافسة وفي وقت قياسي سواء في نقل الحاويات أو البضائع العامة.

كما انها تملك خبرة كبيرة في شحن ونقل المعدات وتقديم الحلول اللوجستية لتنفيذ المشروعات ذات الأبعاد والأوزان غير النمطية (الاستثنائية) من خلال شركتها التابعة "ايتال"، ولعل خير مثال عليها مشروعات محطات توليد الكهرباء، وخطوط إنتاج المصانع، ومشروعات البنية التحتية والبتترول والغاز، وأحدثها كانت مشروعات محطات الرياح التي تتخطى أطوالها ما هو متعارف عليه في قطاع النقل غير النمطي حيث تبلغ أطوال الريش بها حتى ٦٥ متر. وذلك من خلال فريق عمل متخصص وعلى درجة عالية من التدريب يقوم بعمل مسح مفصل للطرق ودراسات لوجستية لتحديد أفضل أسلوب ومسار لنقل كل قطعة من بضائع أي مشروع، ثم يقوم الفريق بعد ذلك بالإشراف على أي أعمال مطلوبة لإصلاح أو تقوية أي جزء من الطريق أو إزالة العقبات على طول الطريق قبل إجراء عملية النقل الفعلي.

وذلك بالإضافة إلى ما تقدمه ايجيترانس من خدمات وحلول مبتكرة في مجالات تخزين وتحميل البضائع فائقة الوزن والأبعاد، ف لدى الشركة ساحة تخزين جمركية تصل إلى مساحة ١٠,٠٠٠ م^٢ وبقوة تحميل تبلغ ٤٠ طن/ م^٢ بميناء الأدبية بالبحر الأحمر، باستخدام أعلى معايير الجودة والصحة والسلامة المهنية والمعايير البيئية. كما تملك ايجيترانس إدارة متخصصة في مجال خدمات المعارض، تضم فريق عمل محترف في الشحن والنقل والخدمات اللوجستية، حيث يتم تقديم الخدمات الفعالة لمنظمي المعارض. وذلك بالإضافة إلى خدمات التخليص الجمركي والتعبئة والتوزيع والتأمين والترانزيت من خلال كيان واحد، لتوفر مجهود عملائها، وتحافظ على وقتهم وأموالهم.

كيف تقيم أداء ايجيترانس في عام ٢٠٢٢؟

كان عام ٢٠٢٢، رغم استمرار ارتباك الأسواق العالمية وقطاع التجارة والنقل واللوجستيات على مستوى العالم، نتيجة للحرب الروسية الأوكرانية، وعدم انتظام الأسواق بشكل كامل بعد تراجع حركة

فيروس كورونا وآثاره السلبية على الاقتصاد العالمي والمحلي، كان عامًا، إلى حد ما، مميّزًا بالنسبة لاييجيترانس، التي استطاعت المضي قدمًا وحققت نسبة كبيرة من خطط التوسع والانتشار وكذلك نتائج مالية متميزة. وعلى سبيل المثال لما انجزته ايجيترانس خلال عام ٢٠٢٢، كان تأسيس شركة " ايجيترانس لحلول السيارات"، المقامة على مساحة ١٠ آلاف متر، ويتركز نشاطها على استيراد وتخزين السيارات المستعملة وتجهيزها للمعاقين، وتصنيع الأجهزة المكلمة اللازمة لها، برأسمال مدفوع قدره ٢٠٠ ألف دولار، وهي مملوكة بالكامل لاييجيترانس. كما اتخذت ايجيترانس خطوات نحو تأسيس شركة " ايجيترانس للحلول اللوجستية" والتي سينقل إليها أعمال النقل البحري والجوي والتخليص الجمركي. كما جاءت عملية الاستحواذ المحتملة من ايجيترانس على شركة "نوسكو" كأحد ثمار نجاح الشركة في تنفيذ خططها التوسعية الموضوعية لعام ٢٠٢٢، والتي من المتوقع ان تتم مع الشهور الاولى لعام ٢٠٢٣. ومن ضمن ما حققته ايجيترانس من أداء متميز، كان عملها الدؤوب للفوز بمشروعات في مختلف المجالات والقطاعات ومنها، مشروعات البترول، والتي حرصت ايجيترانس على متابعة كل ما هو جديد فيها، وذلك من خلال مشاركتها في مؤتمر ومعرض "إيجبس EGYPS ٢٠٢٢" في نسخته الخامسة تحت شعار "شمال أفريقيا والبحر المتوسط... تلبية احتياجات اليوم من الطاقة". حيث ناقشت ايجيترانس عدد من مشروعات البترول والغاز، وذلك امتدادا لما انجزته ايجيترانس من أعمال في قطاع البترول والغاز والبتروكيماويات التي شملت تداول ونقل العديد من الطرود والمهيئات ذات الأبعاد الشاذة وغير النمطية، حيث نفذت الشركة أعمالاً في حقل "ظهر" للغاز، والذي بلغت استثمارات الحكومة المصرية به نحو ١٠,٦ مليار دولار حتى منتصف ٢٠٢٠، ويحتوي على ٢٠ تريليون قدم مكعبة من الغاز. كما نفذت الشركة عددا من عمليات النقل الخاصة بمشروع توسعات "ميدور" بالتعاون مع شركة بتروجيت بما في ذلك نقل أكبر طرد من حيث الأبعاد تم تصنيعه ونقله من ورش بتروجيت بالنظامية الذي بلغ ارتفاعه ١٠ متر ووزنه ٢٠٠ طن، هذا بالإضافة لزيادة عدد العملاء المنتظمين من شركات قطاع البترول. وذلك انطلاقاً من



المهندسة

عبير لهيطة

العضو المنتدب للشركة المصرية
لخدمات النقل والتجارة "إيجيترانس"

NEUMAN & ESSER GROUP



The TOTAL COMPRESSION ENERGY PROVIDERS



The OEM service provider for former reciprocating compressor lines of



KSB
COMPRESSORS

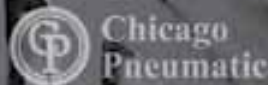


Linde
Borsig

(recips built in Berlin up to the end of 1985)



HALBERG
Demag



NEUMAN & ESSER Egypt Ltd.

Phone: +20 2 33 47 77 91 • Fax: +20 2 33 46 09 49
ahmed.alabyad@nea-egypt.com

www.neuman-esser.com



لمساحة تبلغ أكثر من 11

الف كيلومتر مربع

إكسون موبيل تحصل على حقوق التنقيب في البحر المتوسط

أعلنت شركة إكسون موبيل عن حصولها على حقوق التنقيب في منطقتين قبالة السواحل المصرية وهما منطقة مصري ومنطقة القاهرة، واللتي تقعان في مناطق بحرية مصرية في الإطار الخارجي لدلتا النيل ويفطيان مساحة تبلغ أكثر من 11,000 كيلومتر مربع، وتخضع حقوق التنقيب لموافقة الحكومة على اتفاقيات الامتياز، الواقع تحتها المنطقتين، وتوقيعها في الوقت المناسب. ومن المقرر أن تقوم شركة إكسون موبيل بإجيب "أبستريم" ليمتد، والتي تمتلك حصة تبلغ نسبتها 100٪، بتشغيل كلتا المنطقتين، على أن تبدأ أنشطة الاستكشاف في عام 2022، وذلك عقب توقيع اتفاقيات الامتياز.

البتترول تستعد لحفر آبار استكشافية في البحر الأحمر

تستعد وزارة البترول والثروة المعدنية، خلال الفترة القادمة، لحفر آبار استكشافية بمنطقة بالبحر الأحمر، وذلك بعد الانتهاء من المرحلة الثانية للمسح السيزمي ثلاثي الأبعاد لمساحة 6982 كم²، بتكلفة حوالى 60 مليون دولار، في ظل تكثيف أعمال البحث والاستكشاف للبتترول والغاز بالمناطق الواعدة.

وكشف المهندس طارق الملا، وزير البترول والثروة المعدنية، في وقت سابق، عن أن هناك احتمالات بتروولية جيدة في منطقة البحر الأحمر، حيث تم توقيع 2 اتفاقيات للبحث في تلك المنطقة مع كبريات الشركات العالمية، وجارٍ حاليا الانتهاء من أعمال البحث السيزمي تمهيدا لبدء عمليات الحفر.



تكليف شركة ايبروم باختبارات ما قبل التشغيل والتشغيل المبدئي لأكبر مجمع للتكرير في افريقيا



يتم الانتهاء من خطوات التعاقد للبدء في الاعمال وان قيادات الشركة تولي اهتمام خاص بهذا المشروع لاهميته، خاصة وان المشروع يحظى بمتابعة عالمية نتيجة لحجمه والمبالغ المستثمرة فيه.

تكليف شركة ايبروم باختبارات ما قبل التشغيل والتشغيل المبدئي (Pre-Commissioning & commissioning and startup) لمجمع دنجوتى للتكرير والبتروكيماويات بدولة نيجيريا الشقيقة. يعد مجمع دنجوتى للتكرير والبتروكيماويات الاكبر في افريقيا بطاقة تكرير 650,000 برميل / يوم وهو سادس اكبر معمل تكرير في العالم، المجمع مملوك لمجموعة شركات DANGOTE التابعة لاغنى رجل في افريقيا السيد / ALICO DANGOTE حيث تبلغ اجمالي الاستثمارات في المجمع ما يقرب من 20 مليار دولار. وبناءا على نجاحات شركة ايبروم المتتالية والخبرة المتراكمة لديها والسمعة الحسنة لكوادرها البشرية في تشغيل مصافى التكرير وشركات البتروكيماويات داخل القطر المصرى مثل الشرق الاوسط للتكرير (ميدور) والمصرية للتكرير واسكندرية للبترين الخطى (ايلاب) واسكندرية للزيوت المعدنية (اموك) والمصرية للاستيرين والبولى استيرين (الاستيرنيكس) وايتيدكو. حاليا

فينترسال ديا تكتشف بئرا جديدا للغاز الطبيعي في منطقة التنقيب بشرق دمنهور

المصرية القابضة للغازات الطبيعية (إيجاس).
ويُعتبر الاكتشاف الجديد ثاني بئر استكشافية في هذا الترخيص.
تقع البئر ED-2X على بُعد نحو ثلاثة كيلومترات شمال حقل
دسوق الحالي. وقد اعترض البئر خزانا غازيا سماكته ٤٢ متراً،
حيث يلامس الغاز سطح الماء عند ارتفاع ٢٦٢٧ متراً.



wintershall dea

تمكّنت شركة "فينترسال ديا" من العثور على الغاز في منطقة
التنقيب بشرق دمنهور في منطقة دلتا النيل البرية.

ستقوم الأطراف المكلفة بالتنقيب في هذه المنطقة؛ المشغل
"فينترسال ديا" (٤٠٪) وشريكاتها "كيرون إنرجي" Cheiron
Energy (٤٠٪)، "أي إن إيه" INA (٢٠٪) والشركة المصرية

القابضة للغازات الطبيعية (إيجاس)، بتقييم الاكتشاف ليكون بمثابة خط ربط
مع البنية التحتية القريبة في دسوق. وتقوم شركة دسوق للبترول (ديسوكو)
بتشغيل مشروع غاز دسوق؛ وهي مشروع مشترك بين فينترسال ديا والشركة

القابضة للغازات الطبيعية (إيجاس)، بتقييم الاكتشاف ليكون بمثابة خط ربط
مع البنية التحتية القريبة في دسوق. وتقوم شركة دسوق للبترول (ديسوكو)
بتشغيل مشروع غاز دسوق؛ وهي مشروع مشترك بين فينترسال ديا والشركة

2.7 مليار قدم مكعب يوميا.. حقل ظهر يحقق رقماً قياسياً منذ بدء الإنتاج



خلال الجمعية العامة لاعتماد نتائج أعمال شركتي بتروشروق وبتترول بلاعيم "بتروبل" عن العام
المالي ٢٠٢٢/٢٠٢١. استعرض المهندس خالد موافى رئيس شركة بتروشروق اهم نتائج الاعمال
موضحاً أن حقل غاز ظهر حقق خلال العام المالي ٢٠٢٢/٢٠٢١ رقماً قياسياً منذ بدء الإنتاج عام
٢٠١٧/٢٠١٨ حيث بلغ الإنتاج من الحقل حوالي ٢٧ مليار قدم مكعب غاز طبيعي يومياً علاوة على
نحو ٥ الاف برميل متكثفات يومياً ، لافتاً الى ان الاستثمارات خلال العام بلغ ٧٤١ مليون دولار ليصل
بذلك اجمالي حجم الاستثمارات في حقل ظهر منذ بدء العمل الى اكثر من ١٢ مليار دولار. كما
استعرض موافى نتائج أعمال شركة بتروبل موضحاً أن الإنتاج اليومي بلغ اكثر من مليار قدم مكعب
غاز ونحو ٦٥ الف برميل زيت خام و ١١ الف برميل متكثفات وأن إجمالي الاستثمارات بلغ ٧١٤ مليون
دولار ، وأشار إلى أنه تم خلال العام وضع ١٢ بئراً على الإنتاج بحقول سيناء بمعدلات إنتاج أولية
حوالي ٧٣٠٠ برميل يومياً بالرغم من التناقص الطبيعي للمخزون من الحقول القديمة التي تنتج
منذ أكثر من ٧٠ عاماً، وأنه تم تكثيف أعمال الصيانة للآبار للحفاظ على الإنتاج ، كما استعرض أهم
مشروعات تنمية حقول الغاز الطبيعي مثل بلطيم جنوب غرب وجنوب غرب بشروش.

مقابل 117 مليون دولار.. إنبي وبتروجت تستحوذان على حصة الشريك الأجنبي في العالمية لمهمات الحفر

قامت شركتي «إنبي» و«بتروجت» التابعتين لوزارة البترول بشراء حصة الشريك الأجنبي «شركة
ستار المحدودة» في «شركة العالمية لمهمات الحفر» العاملة بنظام الحرة البالغة نحو ٥٠٪ من
الشركة بقيمة ١١٧,٦ مليون دولار أي بنحو ٢,٢ مليار مليار جنيه.
وذكرت مصادر أن الشريك الأجنبي شركة ستار المحدودة للغاز والزيت والمواد البترولية كانت تمتلك
نحو ٥٠٪ من الشركة، فيما تتوزع الحصة المتبقية بواقع ٢٠٪ لجنوب الوادي القابضة للبترول، و١٥٪
لشركة إنبي، و١٥٪ لصالح بتروجت.
وتابعت المصادر، أنه بعد تنفيذ الصفقة أصبح هيكل ملكية الشركة يتوزع بواقع ٤٠٪ لشركة إنبي،
و٤٠٪ لشركة بتروجت، و٢٠٪ للقابضة للبترول.



التجديد للمهندس محمد بدر رئيساً لشركة أنوبك لمدة عام

قالت مصادر مسؤولة انه تم التجديد للمهندس محمد بدر رئيس شركة أنوبك لمدة عام. ويعتبر بدر من القيادات ذو الكفاءة العالية في قطاع البترول والتي تحظى بثقة كبيرة من المهندس طارق الملا وزير البترول والثروة المعدنية. بدأ المهندس محمد بدرالدين حياته المهنية داخل قطاع البترول من شركة بترول خليج السويس «جابكو» حيث بدأ العمل بها عام ١٩٨٢ حتى ١٩٩٢ عمل خلالها في مشروعات رأس شقير وتدرج في الوظائف بها، ثم إنتقل عام ١٩٩٢ للعمل بشركة إنبي وعمل في العديد من الإدارات وتولي عدة مهام منها مدير إدارة التخطيط بإدارة المشروعات التي كانت تشرف علي جميع مشروعات الغاز والبترول في مصر، كما عمل أيضاً بالتوريدات والعقود ومتابعة العقود، والتشييلات وكما كان رئيساً للجنة البت داخل إنبي، هذا بجانب توليه مهام نادي إنبي بجانب أعماله وتولي المهندس محمد بدر في منتصف ٢٠١٦ حتى منتصف ٢٠١٧ رئاسة شركة OGS، وتولي بعدها رئاسة شركة بتروسبورت حتى صدور قرار المهندس طارق الملا، وزير البترول والثروة المعدنية، بتوليه رئاسة شركة أسبوت الوطنية للتكرير أنوبك بدر الدين حصل أيضاً علي عدة درجات علمية منها ماجستير إدارة الأعمال من جامعة القاهرة، ودبلومة متخصصة في إدارة المشروعات من الجامعة الأمريكية، ودبلومة دراسة عليا في إدارة مشروعات التشييد من جامعة عين شمس.



ستامين العالمية تدشن 4 كيانات جديدة للتنقيب عن الذهب بالصحراء الشرقية



بتنفيذ أعمال الاستكشاف والحفر والإنتاج في منطقة نجد جنوب القصير، و«ستامين المركزية للتعدين»، وتتولى العمل في «نجرس» قرب السكري.

كشف عمرو حسونة، المدير التنفيذي لشركة السكري لمناجم الذهب، مدير «ستامين مصر»، عن تدشين 4 كيانات جديدة تعمل تحت مظلة وإشراف «ستامين» العالمية، لتتولى مهام الاستكشاف والتنقيب في أحدث الامتيازات الجديدة التي فازت بها، ضمن الجولة الأولى بمزايدة الذهب التي طرحتها مصر مؤخراً. وفازت ستامين بنحو ١٩ بلوك للتنقيب عن الذهب، تم جمعها تحت ٢ تراخيص موقعة مع الحكومة المصرية، وفقاً لـ«حسونة»، بإجمالي مساحات حوالى ٢٠٠٠ كيلومتر مربع. كما أنه تمت الموافقة على تأسيس الكيانات الجديدة عقب تقدم «ستامين» للحصول على رخصة استكشاف تلزمها باستثمار حوالى ١٠ ملايين دولار على عمليات جمع الصخور وإعداد الاحتماليات والدراسات الأولية بالامتيازات الجديدة، وذلك خلال فترة ١٨ شهراً، تبدأ من توقيع استلام المناطق وبدء العمل. كما تم الانتهاء من تدشين الكيانات الجديدة عقب الفوز بالمزايدة الأخيرة، وتضم كلاً من «ستامين شمال للتعدين»، وهى مختصة

شركة Shell سفينة الحفر العملاقة Stena Fürth تُنقيب عن البترول والغاز بمصر

في ضوء توسع أنشطة الاستكشاف البحرية في مصر، كشفت شركة شل عن توقيع اتفاقية مع شركة ستينا للحفر لاستخدام سفينة الحفر الضخمة ستينا الرابعة، وبحسب ما رصدته منصة الطاقة المتخصصة صرحت شركة Stena Drilling، شركة حفر بحري، بأنها وقعت صفقة مع الشركة الأنجلو هولندية لاستخدام سفينة الحفر في مصر. بمجرد استيفاء المتطلبات التعاقدية الحالية من المخطط البدء في استخدام منصة الحفر لشركة شل في مصر خلال العام الحالي ٢٠٢٢. وقعت ستينا دريلينج على الاتفاقية مع شركتين تابعتين لشركة شل وهما BG Delta Limited و BG International Limited وفقاً لبيان صادر عن الشركة ان المبادرة ستشمل الاستكشاف الخاصة بشل حفر ثلاثة آبار في البحر الأبيض المتوسط باستخدام Stena Forth.



تعيين رؤساء جدد لشركات البترول ونواب رئيس الهيئة



والمهندس محمد السيد صبحي منصور عامر رئيسا لمجلس الإدارة والعضو المنتدب لشركة مصر لإنتاج الأسمدة موبكو. والمحاسب حسن إبراهيم بدوي رئيسا لمجلس الإدارة والعضو المنتدب للشركة المصرية لنقل وتوصيل الغاز بوتاجاسكو اعتبارا من ٢١ يناير ٢٠٢٢.

أصدر المهندس طارق الملا وزير البترول والثروة المعدنية، قرارات اليوم، لتعيين قيادة جديدة بقطاع البترول. شملت الحركة د.ج/ سمير محمد محيي الدين محمد رسلان، رئيسا للإدارة المركزية لشؤون الاستكشاف مع إشرافه على العقود والاتفاقيات بوزارة البترول والثروة المعدنية. كما شملت المهندس أيمن عبد البديع عبد الغفار عبد الغني نائبا للرئيس التنفيذي للهيئة للنقل والتوزيع وعضوا بالمجلس التنفيذي بالهيئة المصرية العامة للبترول. الكيمائي علاء الدين محمد أمين عيد رئيسا لمجلس إدارة شركة أنابيب البترول. المهندس ثروت سمير محمود أحمد الجندي رئيسا لمجلس الإدارة والعضو المنتدب لشركة عجيبة للبترول. والمهندس خالد إبراهيم محمد حسن رئيسا لمجلس الإدارة والعضو المنتدب لشركة الإسكندرية للصيانة البترولية "بترومنت".

باستثمارات تتجاوز

٣٠٠ مليون جنيه.. تدشين 4 محطات شمسية فى جنوب سيناء قبل «قمة المناخ»

لافتة إلى أن ٢ من بينها سيتم تنفيذها بنظامي BOO وIPP. ويحصل المستثمر من خلال نظام IPP على أراضى هيئة الطاقة المتجددة، على أن يبيع القدرات الكهربائية المنتجة إلى مستهلكين تابعين له عبر استخدام الشبكة القومية، بينما يقوم من خلال نظام BOO بتنفيذ المشروع على أن تشتري وزارة الكهرباء الإنتاج من المحطة. وأشارت المصادر إلى أن المحطة الرابعة تابعة لشركة إيني الإيطالية بمنطقة أبورديس، وتدشنها لإمداد حقول البترول الخاصة بها بالطاقة الكهربائية. وأوضحت أن المشروعات ستعمل بنظام الخلايا الفوتوفولتية والتي يتم من خلالها تحويل أشعة الشمس لطاقة كهربائية عبر الألواح لافتة إلى أن عددا من الشركات الصينية تورد المعدات الخاصة بالمشروعات، وأبرزها صن جرو. يذكر أن إنتاج وزارة الكهرباء من الطاقة المتجددة ارتفع إلى ٧٢٠٠ ميجاوات، تتضمن مشروعات القطاع الخاص، وأهمها مجمع بنبان للطاقة الشمسية بقدرة إجمالية ١٤٦٥ ميجاوات باستثمارات تتجاوز ٢ مليار دولار والذي يعد الأكبر فى الشرق الأوسط. وتسعى مصر للوصول بإجمالى الكهرباء المنتجة من الطاقة المتجددة خلال ٢٠٢٢ إلى ١٠ آلاف ميجاوات، بزيادة قدرها ٢٧٠٠ ميجاوات على العام الجاري، بما يعادل ١١٪، عبر عدد من المشروعات الجارى تدشينها، فيما يصل إجمالى قدرة الشبكة القومية للكهرباء لنحو ٦٠ ألف ميجاوات تضم كل مصادر إنتاج الطاقة.



تتفذه شركات عالمية ومحلية محطات لتوليد الكهرباء من الطاقة الشمسية فى محافظة جنوب سيناء، بقدرات تصل إلى ٢٠ ميجاوات، وباستثمارات تتجاوز ٣٠٠ مليون جنيه، على أن يتم الانتهاء منها قبل انعقاد قمة تغير المناخ «COP27» بمدينة شرم الشيخ فى نوفمبر المقبل. الشركات الأربع تضم «حسن علام»، وتحالف «التوكل - أنترو»، و«إبنى»، و«طاقة عربية». وأضافت المصادر أن قدرات كل محطة ستكون فى حدود ٥ ميجاوات،



تحت رعاية فخامة الرئيس عبد الفتاح السيسي رئيس جمهورية مصر العربية
HELD UNDER THE PATRONAGE OF HIS EXCELLENCY ABDEL FATTAH EL SISI, PRESIDENT OF THE ARAB REPUBLIC OF EGYPT



SUPPORTED BY



RESHAPING THE WORLDS
FUTURE ENERGY MIX

SAVE THE DATE
12 – 14 FEBRUARY 2024

4 EASY WAYS TO
BOOK A STAND

www.egyps.com/bookyourstand
sales@egyps.com
+971 4 248 3214
Scan the QR code



SUPPORTED BY



STRATEGIC PARTNER



DIAMOND SPONSORS



PLATINUM SPONSOR



GOLD SPONSORS



SILVER SPONSORS



BRONZE SPONSORS



ORGANISED BY





wintershall dea

MINDS OF ENGINEERS. PIONEERS AT HEART.

Wintershall Dea is Europe's leading independent gas and oil company. We search for and produce natural gas and crude oil – worldwide. Responsibly and efficiently. With the know-how of our engineers and as pioneers at heart, we are making our contribution to the energy transition. Now and in the future.

wintershalldea.com

VISIT US AT EGYPS 2023
HALL 3



YEARS

PROPELLING
YOUR BUSINESS



SINCE 1973

EGYtrans

egytrans.com